

GenCore version 5.1.3
Copyright (c) 1993 - 2003 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: February 12, 2003, 16:35:15 ; Search time 50 Seconds

(without alignments)
134.383 Million cell updates/sec

Title: US-09-677-374-2

Perfect score: 836

Sequence: 1 MNRGCLQSSLIISVFLVG.....IYGFACRQPDGRMGIYSTEK 162

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SwissProt_40.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	296	35.4	159	17KD_RICPR	P16624 rickettsia
2	294	35.2	159	17KD_RICJA	O52764 rickettsia
3	293	35.0	159	17KD_RICCN	P05372 rickettsia
4	284.5	34.0	159	17KD_RICRY	P22882 rickettsia
5	276	33.0	154	17KD_RICAU	P50928 rickettsia
6	263	31.5	154	17KD_RICAM	P50927 rickettsia
7	261	31.2	154	17KD_RICPA	P50930 rickettsia
8	261	31.2	154	17KD_RICRM	P50931 rickettsia
9	258	30.9	154	17KD_RICMO	P50929 rickettsia
10	157	18.8	80	17KD_RICCA	P29697 rickettsia
11	113.5	13.6	155	PCP_YEREN	P31484 yersinia
12	105.5	12.6	155	SLYB_ECOLI	P55741 escherichia
13	103.5	12.6	155	SLYB_SALTY	O53349 salmonella
14	102	12.2	155	PCP_HAEIN	P10325 haemophilus
15	99	11.8	179	YCFJ_ECOLI	P37796 escherichia
16	98	11.7	172	YFGB_ECOLI	P76672 escherichia
17	90	10.8	526	KICJ_BOVIN	P06394 bos taurus
18	90	10.8	1332	KICD_BOVIN	P54534 bacillus su
19	89	10.6	1583	YOBQ_BACSU	P45331 bacillus su
20	87.5	10.5	72	OSMB_SALTY	P17873 salmonella
21	86.5	10.3	72	OSMB_ECOLI	P17873 escherichia
22	84.5	10.1	243	CYSH_SALTY	P17853 salmonella
23	84.5	10.1	301	STYG_RAT	O92158 rattus norv
24	84.5	10.1	431	KR22_CANAL	O00310 candida alb
25	84.5	10.1	526	VPS_BTV11	P33476 bluetongue
26	83.5	10.0	243	CYSH_SALTY	O82460 salmonella
27	82	9.8	132	Y615_AQUAE	O66867 aquifex aeo
28	82	9.8	263	CANS_BOVIN	P13135 bos taurus
29	81.5	9.7	541	NUS7_YEAST	P48837 saccharomyc
30	81.5	9.7	747	SPD1_NEPCL	P19837 nephila cia
31	80.5	9.6	467	HEML_MYCLE	P46724 mycobacteri
32	79.5	9.5	266	CANS_RABIT	P06613 oryctolagus
33	79.5	9.5	359	ATPA_BOVIN	P19482 bos taurus

34	79.5	9.5	543	1	ATPA_RAT	P15999 rattus norv
35	79.5	9.5	553	1	ATPA_HUMAN	P25705 homo sapien
36	79.5	9.5	734	1	YKR2_CAEEL	P34308 caenorhabdi
37	79	9.4	593	1	KICJ_HUMAN	P13645 homo sapien
38	78.5	9.4	553	1	ATP0_BOVIN	P19483 bos taurus
39	78.5	9.4	553	1	ATPA_MOUSE	O03265 mus musculu
40	78	9.3	865	1	VGLB_HSYMD	P18538 marek's dis
41	77.5	9.3	219	1	YIAD_ECOLI	P37665 escherichia
42	77	9.2	269	1	CANS_MOUSE	O88456 mus musculu
43	77	9.2	393	1	CSP_PLABR	P14593 plasmodium
44	77	9.2	429	1	CSP_PLAMA	P13815 plasmodium
45	77	9.2	506	1	ATPA_ANASP	P12405 anabaena sp

ALIGNMENTS

```

RESULT 1
ID 17KD_RICPR          STANDARD:      PRT: 159 AA.
AC P16624:
DT 01-AUG-1990 (rel. 15, Created)
DT 01-AUG-1991 (rel. 19, Last sequence update)
DT 16-OCT-2001 (rel. 40, Last annotation update)
DE 17 kDa surface antigen precursor.
GN OMP OR RP833.
OS Rickettsia prowazekii.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiae; Rickettsia.
OX NCBI_TaxID=782;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Madrid E;
RX MEDLINE=89359171; PubMed=2768201;
RA Anderson B.E., Tzianabos T.;
RT "Comparative sequence analysis of a genus-common rickettsial antigen
RT gene.";
RL J. Bacteriol. 171:5199-5201(1989).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=Madrid E;
RX MEDLINE=99039499; PubMed=9823893;
RA Andersson S.G.E., Zomorodipour A., Andersson J.O.,
RA Sickeritz-Ponten T., Alsmark U.C.M., Podowski R.M., Naslund A.K.,
RA Eriksson A.-S., Winkler H.H., Kurland C.C.;
RT "The genome sequence of Rickettsia prowazekii and the origin of
RT mitochondria.";
RL Nature 396:133-140(1998).
CC -! SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid
CC anchor (Probable).
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@sib-sib.ch).
CC -----
CC EMBL: M28482; AAA26378.1; ALT_SEQ.
CC EMBL: A7325273; CAA15258.1; -.
CC PIR: D33971; D33971.
CC PROSITE: PS00013; PROKAR_LIPOPROTEIN; 1.
CC Outer membrane; Lipoprotein; Antigen; Signal; Complete proteome.
CC SIGNAL
CC FT CHAIN 1 19 17 KDA SURFACE ANTIGEN.
CC FT LIPID 20 20 N-ACYL DIGLYCERIDE (PROBABLE).
CC FT SEQUENCE 159 AA; 16672 MW; A33D404B65EEB071 CRC64;
Query Match 35.4%; Score 296; DB 1; Length 159;
Best Local Similarity 38.1%; Pred. No. 7.1e-19;
Matches 61; Conservative 30; Mismatches 55; Indels 14; Gaps 4;

```

```

QY 9 SLLIIIV---FLVGC--AQNFSOEVGANTGAIVGVGAQLPFKGGGRVAMATGAVLG 63
   |:::|::| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 5 SKIITIALASMLQACGSGSGMKNCGRTGLTGAGGALLSQFQGGGLGVGVGALLG 64
   ::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 64 GLIGSKTIGSGMDQDK---IKLNQSLKVKAGVTFWRNPDTGNSYSVEPVRTQRYNK 119
   ::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 65 AVLGGQIGAGMDEQDRRLLELTTSQRALESAPSGSNIEWRPNPDNNGHYVTPNKTY----- 119
   ::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 120 QERROQYCREFOQKAMTAGOKOETIYGTACROPDGRMVOYIS 159
   |:::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 120 RNSTGQYCREYTGTVIIGSKQOKAYAGNACROPDGMQOVVN 159
   |:::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

RESULT 3
17KD_RICCN
ID 17KD_RICCN STANDARD; PRT; 159 AA.

Query Match 35.2%; Score 294; DB 1; Length 159;
Best Local Similarity 38.1%; Pred. No. 1.1e-18;
Matches 61; Conservative 30; Mismatches 55; Indels 14; Gaps 4;

QY 9 SLLIIIV---FLVGC--AQNFSOEVGANTGAIVGVGAQLFEGSGGRVAMATGAVLG 63
   |:::|::| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 5 SKIITIALASMLQACNGPGMKNCKGTGLTGAGGALLSGFGGTGLVGVGVGALLG 64
   ::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 64 GLIGSKTIGSGMDQDK---IKLNQSLKVKAGVTFWRNPDTGNSYSVEPVRTQRYNK 119
   ::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 65 AVLGGQIGAGMDEQDRRLLELTTSQRALESAPSGSNIEWRPNPDNNGHYVTPNKTY----- 119
   ::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 120 QERROQYCREFOQKAMTAGOKOETIYGTACROPDGRMVOYIS 159
   |:::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 120 RNSTGQYCREYTGTVIIGSKQOKAYAGNACROPDGMQOVVN 159
   |:::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

EMBL: D16515; BA03965.1; -
DR PROSITE: PS00013; PROKAR_LIPOPROTEIN; 1.
KW Outer membrane; Lipoprotein; Antigen; Signal.
FT SIGNAL 1 19 BY SIMILARITY.
FT CHAIN 20 159 17 KDA SURFACE ANTIGEN.
FT LIPID 20 20 N-ACYL DIGLYCERIDE (PROBABLE).
SQ SEQUENCE 159 AA; 16554 MW; CDDCEFCBBDDB41 CRC64;

This SWISS-PROT entry is copyright. It is produced through a collaboration
between the Swiss Institute of Bioinformatics and the EMBL outstation
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
modified and this statement is not removed. Usage by and for commercial
entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).

```

AC	P05372; 1988 (Rel. 09, Created)
DT	01-AUG-1990 (Rel. 15, Last sequence update)
DE	15-JUN-2002 (Rel. 41, Last annotation update)
GN	OMP OR RC1287.
OS	Rickettsia conorii, and
OC	Rickettsia rickettsii.
CC	Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OX	Rickettsiaceae; Rickettsiinae; Rickettsia.
LN	NCBI_TaxId=781, 783;
RP	[1]
RC	SEQUENCE FROM N.A.
RX	SPECIES-R.conorii, and R.rickettsii;
RA	MEDLINE=89359171; PubMed=2768201;
RT	Anderson B.E., Tzianabos T.;
RL	"Comparative sequence analysis of a genus-common rickettsial antigen gene.";
RN	J. Bacteriol. 171:5199-5201(1989).
RP	[2]
RC	SEQUENCE FROM N.A.
RX	SPECIES-R.conorii, STRAIN-Malish 7;
RA	MEDLINE=21442074; PubMed=11557893;
RT	Ogata H., Audic S., Renesto-Audiffren P., Fournier P.-E., Barbe V.,
RL	Samsom D., Roux V., Cossart P., Weissenbach J., Claverie J.-M.,
RN	Raoult D.;
RP	"Mechanisms of evolution in Rickettsia conorii and R. prowazekii.";
RX	Science 293:2093-2098(2001).
RT	[3]
RC	SEQUENCE FROM N.A.
RX	SPECIES-R.rickettsii;
RA	MEDLINE=87222152; PubMed=3108232;
RT	Anderson B.E., Regnery R.L., Carlone G.M., Tzianabos T., McBade J.E.,
RL	Fu Z.Y., Bellini W.J.;
RN	"Sequence analysis of the 17-kilodalton-antigen gene from Rickettsia
RP	rickettsii.";
RX	J. Bacteriol. 169:2385-2390(1987).
RT	[4]
RC	SEQUENCE OF 1-30 FROM N.A.
RX	SPECIES-R.rickettsii;
RA	MEDLINE=89008059; PubMed=3139629;
RT	Anderson B.E., Baumstark B.R., Bellini W.J.;
RL	"Expression of the gene encoding the 17-kilodalton antigen from
RN	Rickettsia rickettsii: transcription and posttranslational
RP	modification.";
RX	J. Bacteriol. 170:4493-4500(1988).
RT	-I- SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid
RL	anchor (Probable).
CC	-----
CC	This SWISS-PROT entry is copyright. It is produced through a collaboration
CC	between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC	the European Bioinformatics Institute. There are no restrictions on its
CC	use by non-profit institutions as long as its content is in no way
CC	modified and this statement is not removed. Usage by and for commercial
CC	entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC	or send an email to license@sib.ch).
CC	-----
DR	EMBL; M28479; AAA26379.1; -
DR	EMBL; M28480; AAA26376.1; -
DR	EMBL; AE008675; AAL03825.1; -
DR	EMBL; M16486; AAA26381.1; -
DR	EMBL; J03371; -; NOT_ANNOTATED_CDS.
DR	PIR; A25972; A25972.
DR	PIR; A31836; A31836.
DR	PIR; A33971; A33971.
DR	PIR; B33971; B33971.
KW	Prostate; PS00013; PROKAR_LIPOPROTEIN, 1.
FT	Outer membrane; Lipoprotein; Antigen; Signal; Complete proteome.
FT	SIGNAL 1 19
FT	CHAIN 20 159
FT	LIPID 20 20
FT	CONFLICT 146 146
FT	CONFLICT 153 153
FT	N-ACYL DIGLYCERIDE (PROBABLE).
FT	N->D (IN REF. 3).
FT	G->E (IN REF. 3).

SEQUENCE 159 AA: 16581 MW: 206A2BBF74FCE169 CRC64;
Query Match 35.0%; Score 293; DB 1; Length 159;
Best Local Similarity 38.1%; Pred. No. 1.3e-18;
Matches 61; Conservative 29; Mismatches 56; Indels 14; Gaps 4;
QY 9 SLLIIISV---FLVGC--AQNFSROEVGAATGAVGVAGQLFGKSGSVMAIGAVIG 63
D 5 SKIMIIALATSMLOACNCGPCGNKOGTGLTGAGGALLGSQFGKKGQLVGVGALLG 64
QY 64 GLIGSKIGSMQDQK---IKLNSLEKVKAGQYTRMRNPDTGNSYSVEPYRYQRYNK 119
D 65 AVLGGIGAGMDEQDRLAELTSGRALETAPSGSNVEMNPUNGNYVTYPTKTY---- 119
QY 120 QERRQYCFEFOQKAMIAQKOEIYGTACROPDGRMVOYS 159
D 120 RNSTGYCREYQTYVIGGKQKAYGNACROPDGMQVYN 159
RESULT 4
17KD_RICMY STANDARD: PRT: 159 AA.
AC P22882;
DT 01-AUG-1991 (Rel. 19, Created)
DT 01-AUG-1991 (Rel. 19, Last sequence update)
DT 01-OCT-1996 (Rel. 34, Last annotation update)
DE 17 kDa surface antigen precursor.
GN OMP.
OS Rickettsia typhi.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiiae; Rickettsia.
OX NCBI_TaxID=785;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=89359171; PubMed=2768201;
RA Anderson B.E., Zianabos T.;
RT "Comparative sequence analysis of a genus-common rickettsial antigen gene."
RL J. Bacteriol. 171:5199-5201(1989).
CC -!- SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid anchor (Probable).
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See <http://www.isb-sib.ch/announce/> or send an email to license@sib-sib.ch).
CC -----
CC EMBL: M28481; AAA26377.1; -;
DR PIR: C33971.
DR PROSITE: PS00013; PROKAR_LIPOPROTEIN; 1.
KM Outer membrane; Lipoprotein; Antigen; Signal.
FT SIGNAL 1 19
FT CHAIN 1 159
FT LIPID 20 20 N-ACYL DIGLYCERIDE (PROBABLE).
FT LIPID 20 20 N-ACYL DIGLYCERIDE (PROBABLE).
SQ SEQUENCE 159 AA: 16549 MW: 08973E2648FDBCD8 CRC64;
Query Match 34.0%; Score 284.5; DB 1; Length 159;
Best Local Similarity 39.9%; Pred. No. 6.9e-18;
Matches 55; Conservative 25; Mismatches 49; Indels 9; Gaps 2;
QY 26 SHOEVGAAATGAVGVAGQLFGKSGSVMAIGAVIGLIGSKIGSMQDQK---IK 81
D 27 NQGGTTLGGAGLGSQFGHKGQLVGVGALLGVAGLGLGSDDEQDKLLELT 86
QY 82 LNSLEKVKAGQYTRMRNPDTGNSYSVEPYRYQRYQRYQRYQRYQRYQRYQRYQRY 141
D 87 SGRALSAFSGNSINEMRNPDNGNHGVTPNKTY-----RNSYGYCREYQTYVIGGKQ 141
QY 142 EYGTACROPDGRMVOYS 159
D 142 EYGTACROPDGRMVOYS 159

DB 142 TTYGNACROPDGMQVYN 159
RESULT 5
17KD_RICAU STANDARD: PRT: 154 AA.
AC P50928;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 01-OCT-1996 (Rel. 34, Last annotation update)
DE 17 kDa surface antigen precursor (Fragment).
GN OMP.
OS Rickettsia australis.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiiae; Rickettsia.
OX NCBI_TaxID=787;
RN [1]
RP SEQUENCE FROM N.A.
RA Baird R.W., Ross B., Dwyer B.;
RL Submitted (OCT-1991) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid anchor (Probable).
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See <http://www.isb-sib.ch/announce/> or send an email to license@sib-sib.ch).
CC -----
CC EMBL: M74042; AAA26394.1; -;
DR PROSITE: PS00013; PROKAR_LIPOPROTEIN; 1.
KM Outer membrane; Lipoprotein; Antigen; Signal.
FT SIGNAL 1 19
FT CHAIN 20 >154 B1 SIMILARITY.
FT LIPID 20 20 17 KDA SURFACE ANTIGEN.
FT LIPID 154 154 N-ACYL DIGLYCERIDE (PROBABLE).
FT NON_TER 154 154
SQ SEQUENCE 154 AA: 15967 MW: E3AA83346FAC320 CRC64;
Query Match 33.0%; Score 276; DB 1; Length 154;
Best Local Similarity 38.1%; Pred. No. 3.6e-17;
Matches 59; Conservative 27; Mismatches 55; Indels 14; Gaps 4;
QY 9 SLLIIISV---FLVGAQ--NFSROEVGAATGAVGVAGQLFGKSGSVMAIGAVIG 63
D 5 SKIMIIALATSMLOACNCGPCGNKOGTGLTGAGGALLGSQFGKKGQLVGVGALLG 64
QY 64 GLIGSKIGSMQDQK---IKLNSLEKVKAGQYTRMRNPDTGNSYSVEPYRYQRYNK 119
D 65 AVLGGIGAGMDEQDRLAELTSGRALETAPSGSNVEMNPUNGNYVTYPTKTYRNSN- 123
QY 120 QERRQYCFEFOQKAMIAQKOEIYGTACROPDGR 154
D 124 ---GQYCREYQTYVIGGKQKAYGNACROPDQ 154
RESULT 6
17KD_RICAM STANDARD: PRT: 154 AA.
AC P50927;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 01-OCT-1996 (Rel. 34, Last annotation update)
DE 17 kDa surface antigen precursor (Fragment).
GN OMP.
OS Rickettsia amblyommii.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiiae; Rickettsia.
OX NCBI_TaxID=33989;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-MO 85-1084;

```

CC      Stothard D.R., Ralph D.A., Clark J.B., Fuerst P.A., Pretzman C.;
RL      Submitted (JUN-1995) to the EMBL/GenBank/DBJ databases.
CC      -1- SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid
CC      anchor (Probable).
CC      -----
CC      This SWISS-PROT entry is copyright. It is produced through a collaboration
CC      between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC      the European Bioinformatics Institute. There are no restrictions on its
CC      use by non-profit institutions as long as its content is in no way
CC      modified and this statement is not removed. Usage by and for commercial
CC      entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC      or send an email to license@isb-sib.ch).
CC      -----
DR      EMBL; U11013; AAB07704.1; -
KW      PROSITE; PS00013; PROKAR_LIPOPROTEIN; 1.
RR      Outer membrane; Lipoprotein; Antigen; Signal.
FT      SIGNAL 1 19
FT      CHAIN 20 >154 BY SIMILARITY.
FT      LIPID 20 20 17 KDA SURFACE ANTIGEN.
FT      NON_TER 154 154 N-ACETL DIGLUCERIDE (PROBABLE).
SQ      SEQUENCE 154 AA; 15879 MW; E4FBE4C29D943581 CRC64;

Query Match 31.5%; Score 263; DB 1; Length 154;
Best Local Similarity 36.8%; Pred. No. 4.8e-16;
Matches 57; Conservative 27; Mismatches 57; Indels 14; Gaps 4;

QY      9 SLLIIISV---FLVGC--AQNFSRQEVGAAATGAVYGVAGQLFGKSGRVAAMATGAVLG 63
DB      5 SKIMIIALAASTLQACNGPFGMKNKGOTGTLIGAGGALLGSGFGKGQGLVGVGALLG 64
QY      64 GLIGKSTGSGSMQODK----IKLNSLEKVRKQGYTRWRNPDTGMSYSSEPTQTQRINK 119
DB      65 AYLGGVGVGMMEDDRIELTAPNGSNVEMPDNGNIVGYTPNKTY----- 119
QY      *120 QERRQYCRFPOQKAMIAQKOEIYGTACROPDGR 154
DB      120 RNSTGYCREYGTQYVIGSKQKATGNACROPDQG 154

RESULT 7
17KD_RICPA
ID 17KD_RICPA STANDARD; PRT; 154 AA.
AC P50930;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 01-OCT-1996 (Rel. 34, Last annotation update)
DE 17 kDa surface antigen precursor (Fragment).
GN OMP.
OS Rickettsia parkeri.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiinae; Rickettsia.
OX NCBI_TaxID=35792;
RN [1]
RP SEQUENCE FROM N.A.
RA STRAIN=Maculatum;
RA Pretzman C.I., Stothard D.R., Ralph D., Clark J.B., Fuerst P.A.;
RL Submitted (DEC-1994) to the EMBL/GenBank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid
CC anchor (Probable).
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR      EMBL; U17008; AAA82040.1; -
RR      PROSITE; PS00013; PROKAR_LIPOPROTEIN; 1.
KW Outer membrane; Lipoprotein; Antigen; Signal.
FT SIGNAL 1 19
FT CHAIN 20 >154 BY SIMILARITY.
FT NON_TER 154 154 17 KDA SURFACE ANTIGEN.
SQ      SEQUENCE 154 AA; 15879 MW; E4FBE4C29D943581 CRC64;

```

```

FM      LIPID     20       20          N-ACYL DIHYCERIDE (PROBABLE) .
FT      FTN_TBR   154      154
SO SEQUENCE    154 AA; 15897 MW; 5D06F45FDDBD5EBC CRC64;

Query Match
Best Local Similarity 31.2%; Score 261.; DB 1; Length 154;
Matches 56; Conservative 28; Mismatches 57; Indels 14; Gaps 4;

QY SLLITISV---FLVGC--AQNFSRFEVAALGAVGVAGOLFEGKSGRYAMAAIGAVLG 63
Db SKIMWIALATSMLAGNCNRPGGMNKOGTGTLLGGAGGALLGSOFKGKKQLVGTVGVALLG 64
::|::||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 64 GLISKICQSMDQQDK----IKLNDSLEKYAKGOVTFRNRNPDTGNSTSYVEEVRTYYQRNK 119
Db 65 AVLGGOLGAGMDEODRRRLAEILTSORALETTAPASGVNERPNPDNGNYGYTPNTKT----- 119

QY 120 QERROQCREFEOOKAMIAGOKEIYTACROPDR 154
Db 120 RNSTGQCYCRETYQTIVYGKQAAGAANCLADPQG 154
::|::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

RESULT 8
17KD_RICRH STANDARD; PRI; 154 AA.
ID 17KD_RICRH STANDARD; PRI; 154 AA.
AC P50931.
CD 01-OCT-1996 (Rel. 34, Created)
DI 01-OCT-1996 (Rel. 34, Last sequence update)
DI 01-OCT-1996 (Rel. 34, Last annotation update)
DE DE 17 kDa surface antigen precursor (Fragment).
GN OMP.
OS Rickettsia rhipicephali.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettiales;
OC Rickettsiaceae; Rickettsiae; Rickettsia.
RX NCBI_TaxID=33992;
RN [1]
RP SEQUENCE FROM N.A.
RA Stochard D.R., Ralph D.A., Clark J.B., Fuerst P.A., Pretzman C.;
RI Submitted (Aug-1994) to the EMBL/Genbank/DDBJ databases.
CC -!- SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid anchor (Probable).
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL Outstation at the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb.sib.ch).
CC -----
CC EMBL_011020; AAB07706.1; -.
DR PROSITE; PS00013; PROKAR_LIPOPEPTIN; 1.
KW Outer membrane; Lipoprotein; Antigen; Signal.
FT SIGNAL 1 BY SIMILARITY.
FT CHAIN 20 >154 17 KDA SURFACE ANTIGEN.
FT LIPID 20 20 N-ACYL DIGLYCIDATE (PROBABLE).
FT NON_TER 154 154
SQ SEQUENCE 154 AA; 15895 MW; 0CF85AD5D96DEFEB CRC64;

Query Match
Best Local Similarity 31.2%; Score 261.; DB 1; Length 154;
Matches 56; Conservative 28; Mismatches 57; Indels 14; Gaps 4;

QY SLLITISV---FLVGC--AQNFSRFEVAALGAVGVAGOLFEGKSGRYAMAIGAVLG 63
Db 5 SKIMWIALATSMLAGNCNRPGGMNKOGTGTLLGGAGGALLGSOFKGKKQLVGTVGVALLG 64
::|::||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
QY 64 GLISKICQSMDQQDK----IKLNDSLEKYAKGOVTFRNRNPDTGNSTSYVEEVRTYYQRNK 119
Db 65 AVLGGOLGAGMDEODRRRLAEILTSORALETTAPASGVNERPNPDNGNYGYTPNTKT----- 119

QY 120 QERROQCREFEOOKAMIAGOKEIYTACROPDR 154
Db 120 RNSTGQCYCRETYQTIVYGKQAAGAANCLADPQG 154
::|::::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

```



```

DR PIR: S23787; S23787.
DR PROSITE: PS00013; PROKAR_LIPOPROTEIN; 1.
KW Outer membrane; Lipoprotein; Signal.
FT SIGNAL 1 17 POTENTIAL.
FT CHAIN 18 155 OUTER MEMBRANE LIPOPROTEIN PCP.
FT LIPID 18 18 N-ACYL DIGLYCERIDE (POTENTIAL).
SQ SEQUENCE 155 AA; 15362 MW; 8AD6BE2132E849FA CRC64;

Query Match
Best Local Similarity 24.7%; Pred. No. 0.0038;
Matches 37; Conservative 19; Mismatches 43; Indels 51; Gaps 4;

OY 10 SLIISVFLVGAQN-----FSRQE-----VGANT 34
DB 7 AVAIAVATLTCGANNNTLSGDFESASQAKQVOTVYTGILLVPRVYTIQGGDDNNVMAIG 66
OY 35 GAVGVGAQOLGKSGGRVMAIGAVLGILGSKIGSGMDQDKIKL----- 82
DB 67 GAVLGGLNTVGGGTGRSLATPAAGAVAGMGAGGVQAGAMRTDGVQLEVRKDDGTTILV 126
OY 83 --NQSLKVKAGQVTRMRNPDIGNSYSVEP 110
DB 127 YOKGPTRESVQ--RVMLASSGSTVTSVP 154

RESULT 12
SLYB.ECOLI STANDARD; PRT; 155 AA.
AC P55741: P76183;
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 16-OCT-2001 (Rel. 40, Last annotation update)
DE Outer membrane lipoprotein slyb precursor.
OS SLYB OR B1641 OR 22655 OR ECS2350.
OC Escherichia coli, and
OC Escherichia coli O157:H7.
OC Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae;
OC Escherichia.
OX NCBI_TaxID=562, 83334;
ON (1)
RX MEDLINE=96133688; PubMed=8544813;
RA Ludwig A., Tengel C., Bauer S., Bubert A., Benz R., Mollenkopf H.-J.,
RT Goebel W.;
RT "Slyb, a regulatory protein from Salmonella typhimurium, induces a
RL hemolytic and pore-forming protein in Escherichia coli.";
RL Mol. Genet. 249:474-486(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=K12 / MG1655;
RX MEDLINE=97426617; PubMed=9278503;
RA Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V.,
RA Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F.,
RA Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
RA Mau B., Shao Y.;
RA "The complete genome sequence of Escherichia coli K-12.";
RL Science 277:1453-1474(1997).
RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN=K12;
RX MEDLINE=97251357; PubMed=9097039;
RA Alba H., Baba T., Fujita K., Hayashi K., Inada T., Isono K.,
RA Itoh T., Kasai H., Kashimoto K., Kimura S., Kitakawa M.,
RA Kitagawa M., Makino K., Miki T., Mizobuchi K., Mori H., Mori T.,
RA Motomura K., Nakade S., Nakamura Y., Nishimoto H., Nishio Y.,
RA Oshima T., Saito N., Sampei G., Seki Y., Sivasubram S.,
RA Tagami H., Takeda J., Takemoto K., Takeuchi Y., Wada C.,
RA Yamamoto Y., Horinouchi T.;
RA "A 570-kb DNA sequence of the Escherichia coli K-12 genome
RT corresponding to the 28.0-40.1 min region on the linkage map.";
RL DNA Res. 3:363-377(1996).
RN [4]
RP SEQUENCE FROM N.A.

```

```

RC STRAIN=O157:H7 / EDL933 / ATCC 700927;
RX MEDLINE=21074935; PubMed=11206551;
RA Perna N.T., Plunkett G. III, Burland V., Mau B., Glasner J.D.,
RA Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A.,
RA Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller B.,
RA Grobbeck E.J., Davis N.W., Lim A., Dimmlanta E.T., Potamousis K.,
RA Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C.,
RA Welch R.A., Blattner F.R.;
RA "Genome sequence of enterohaemorrhagic Escherichia coli O157:H7.";
RL Nature 409:529-533(2001).
RN [5]
RP SEQUENCE FROM N.A.
RC STRAIN=O157:H7 / RIMD 0509952;
RX MEDLINE=21156231; PubMed=11258796;
RA Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoyama K.,
RA Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe T.,
RA Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunaga T.,
RA Kuhara S., Shiba T., Hattori M., Shinagawa H.;
RA "Complete genome sequence of enterohaemorrhagic Escherichia coli
RT O157:H7 and genomic comparison with a laboratory strain K-12.";
RL DNA Res. 8:11-22(2001).
CC -I- SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid
CC anchor (potential).
CC -I- SIMILARITY: TO S.TYPHIMURIUM SLYB, H.INFLUENZAE PCP AND
CC Y. ENTEROCOLITICA PCP.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC
DR EMBL: AE000259; AAC74713.1; -
DR EMBL: D90807; BAA15402.1; -
DR EMBL: AE005387; AAG56630.1; -
DR EMBL: AP002558; BAB35773.1; -
DR Ecogene: EG13409; SLYB.
DR PROSITE: PS00013; PROKAR_LIPOPROTEIN; 1.
KW Outer membrane; Lipoprotein; Signal; Complete proteome.
FT SIGNAL 1 17 POTENTIAL.
FT CHAIN 18 155 OUTER MEMBRANE LIPOPROTEIN SLYB.
FT LIPID 18 18 N-ACYL DIGLYCERIDE.
FT CONFLICT 98 98 A->T (IN REF. 2).
SQ SEQUENCE 155 AA; 15602 MW; 543EBBA4069A5FA3 CRC64;

Query Match
Best Local Similarity 12.6%; Score 105.5; DB 1; Length 155;
Matches 33; Conservative 21; Mismatches 42; Indels 49; Gaps 4;

OY 13 IISVFLVGAQN-----FSRQE-----VGANTGAV 37
DB 10 MGSLIVGCVNNDTLSDGYTASEAKQVQNSYGTIVNRPVQIGGDSNVTAIGAV 69
OY 38 VGVGAQOLGKSGGRVMAIGAVLGILGSKIGSGMDQDKIKLNSLEKKAQVTRW 97
DB 70 LGGLGNTVGGGTGRSLATPAAGAVAGMGAGGVQAGAMRTDGVQLEVRKDDGTTILV 118
OY 98 RNPDTGNSYSVEPRTYRQYRNKQER 122
DB 119 --DDGNTIIVVQKQGNTRFSPQOR 140

RESULT 13
SLYB.SALTY STANDARD; PRT; 155 AA.
AC Q53549;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 15-JUN-2002 (Rel. 41, Last annotation update)
DE Outer membrane lipoprotein slyb precursor.
RN [4]
RP SLYB OR STM1445 OR SRY1677.

```

```

OS Salmonella typhimurium, and
OC Salmonella typhi.
OC Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae;
OC Salmonella.
OX NCBI_TaxId=602, 601;
RN [1]
RP SEQUENCE FROM N.A.
RC SPECIES=S.typhimurium;
RX MEDLINE=96133688; PubMed=8544813;
RA Ludwig A., Tengell C., Bauer S., Bubert A., Benz R., Mollenkopf H.-J.,
RA Goebel W.;
RT "SlyA, a regulatory protein from Salmonella typhimurium, induces a
RT haemolytic and pore-forming protein in Escherichia coli.";
RL Mol. Gen. Genet. 249:474-486(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC SPECIES=S.typhimurium; STRAIN=LT2 / SGSC1412 / ATCC 700720;
RX MEDLINE=21534948; PubMed=11677609;
RA McClelland M., Sanderson K.E., Spieth J., Clifton S.W., Latreille P.,
RA Courtney L., Porwollik S., Ali J., Dante M., Du F., Hou S., Layman D.,
RA Leonard S., Nguyen C., Scott K., Holmes A., Grewal N., Mulvaney E.,
RA Ryan E., Sun H., Flores L., Miller W., Stoneking T., Nhan M.,
RA Waterston R., Wilson R.K.;
RT "Complete genome sequence of Salmonella enterica serovar Typhimurium
RT LT2.";
RL Nature 413:852-856(2001).
RN [3]
RP SEQUENCE FROM N.A.
RC SPECIES=S.typhi; STRAIN=CT18;
RX MEDLINE=21534947; PubMed=11677608;
RA Parikh H.J., Dougan G., James K.D., Thomson N.R., Pickard D., Main J.,
RA Churcher C., Mungall K.L., Bentley S.D., Holden M.T.G., Sebahia M.,
RA Baker S., Basham D., Brooks K., Chillingworth T., Connor P.,
RA Cronin A., Davis P., Davies R.M., Dowd L., White N., Farrar J.,
RA Feltwell T., Hamlin N., Haque A., Hien T.T., Holtroyd S., Jagels K.,
RA Krogan A., Larsen T.S., Leachter S., Moulé S., O'Gaora P., Parry C.,
RA Quail M., Rutherford K., Simmonds M., Skelton J., Stevens K.,
RA Whitehead S., Barrett B.G.;
RT "Complete genome sequence of a multiple drug resistant Salmonella
RT enterica serovar Typhi CT18.";
RL Nature 413:848-853(2001).
RN [4]
RP SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid
anchor (Potential).
CC -1- SIMILARITY: TO E.COLI SLTB, H.INFLUENZAE PCP AND Y. ENTEROCOLITICA
PCP.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC
CC EMBL: S80790; AAB35871.2; -
CC EMBL: AE008762; AAL20367.1; -
CC EMBL: AL627271; CAD01922.1; -
CC STYGENE: SG10573; sltb.
CC PROSITE: PS00013; PROKAR_LIPOPROTEIN; 1.
CC Outer membrane; Lipoprotein; Signal; Complete proteome.
CC STGNAL 1 17 POTENTIAL.
CC FT CHAIN 18 155 OUTER MEMBRANE LIPOPROTEIN SLTB.
CC FT LIPID 18 18 N-ACYL DIGLYCERIDE.
CC SEQUENCE 155 AA: 15548 MW: 82FDCCCBABD55A7 CRC64;

```

Query Match 12.6%; Score 105.5; DB 1; Length 155;
 Best Local Similarity 24.6%; Pred. No. 0.019;
 Matches 34; Conservative 19; Mismatches 52; Indels 33; Gaps 3;

```

OY 4 GCGGSSLSL-----ITTSVFLVGCAGNPSRQEVGAAGAVGVAGQ 44
DB 17 GCYVNDLSLSDVYTTASAKOVONYVTGTIVNRPVQIQGGSDNSDVAIGAVLGGFLGN 76

```

```

OY 45 LFGKSGRVAMAIGAVLGLISKGISQSDQDKIKLNSLEKRVAGVYTRMRNPDTGN 104
DB 77 TTIGGTGTRSLATAGAVAGVAGVQVGSAMNKTQGVEL--EIKR-----DDGN 122
OY 105 SYSEVPRTYQRYNKQER 122
DB 123 TIMVYOKGNTREFSAGOR 140

```

```

RESULT 14
PCP_HAEIN
ID PCP_HAEIN STANDARD; PRT; 155 AA.
AC P10325;
DT 01-MAR-1989 (Rel. 10, Created)
DT 01-NOV-1995 (Rel. 32, Last sequence update)
DT 15-JUN-2002 (Rel. 41, Last annotation update)
DE Outer membrane lipoprotein PCP precursor (15 kDa lipoprotein) (PAL
DE cross-reacting lipoprotein).
GN PCP OR LPP OR H11579.
OS Haemophilus influenzae.
OC Bacteria; Proteobacteria; gamma subdivision; Pasteurellaceae;
OX NCBI_TaxId=727;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=88115138; PubMed=2828309;
RA Delch R.A., Metcalf B.J., Finn C.W., Farley J.E., Green B.A.;
RT "Cloning of genes encoding a 15,000-dalton peptidoglycan-associated
RT outer membrane lipoprotein and an antigenically related 15,000-dalton
RT protein from Haemophilus influenzae.";
RL J. Bacteriol. 170:489-498(1988).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=Rd / KW20 / ATCC 51907;
RX MEDLINE=95350630; PubMed=7542800;
RA Fieischmann R.D., Adams M.D., White O., Clayton R.A., Kirkness E.F.,
RA Kerlavage A.R., Bult C.J., Tomb J.-F., Dougherty B.A., Merrick J.M.,
RA McKenney K., Sutton G., Fitzhugh W., Fields C.A., Gocayne J.D.,
RA Scott J.D., Shirley R., Liu L.-F., Glodek A., Kelley J.M.,
RA Weidman J.F., Phillips C.A., Spriggs T., Hedblom E., Cotton M.D.,
RA Usterback T.R., Hanna M.C., Nguyen D.T., Saudek D.M., Brandon R.C.,
RA Fine L.D., Fritchman J.L., Fuhrmann J.L., Georgagen N.S.M.,
RA Gnehm C.L., McDonald L.A., Small K.V., Fraser C.M., Smith H.O.,
RA Venter J.C.;
RT "Whole-genome random sequencing and assembly of Haemophilus influenzae
RT Rd.";
RL Science 269:496-512(1995).
RN [3]
RP SUBCELLULAR LOCATION: Attached to the outer membrane by a lipid
anchor.
CC -1- SIMILARITY: TO E.COLI AND S.TYPHIMURIUM SLTB AND TO
Y. ENTEROCOLITICA PCP.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC
CC EMBL: M18877; AAA24938.1; -
CC EMBL: U32832; AAC23228.1; -
CC PIR: B28543; B28543.
CC TTGR: H11579; -
CC PROSITE: PS00013; PROKAR_LIPOPROTEIN; 1.
CC Outer membrane; Lipoprotein; Signal; Complete proteome.
CC STGNAL 1 18
CC FT CHAIN 1 155 OUTER MEMBRANE LIPOPROTEIN PCP.
CC FT LIPID 19 19 N-ACYL DIGLYCERIDE.
CC FT CONFLICT 135 143 CSIVAEFV -> VAGRPRI (IN REF. 1).
CC SEQUENCE 155 AA: 15425 MW: D7860327FEC0C985 CRC64;

```

Query Match 12.2%; Score 102; DB 1; Length 155;

Best Local Similarity 39.6%; Pred. No. 0.038;
Matches 21; Conservative 9; Mismatches 23; Indels 0; Gaps 0;

QY 30 VGATGAVGVAGOLFPGKSGRVAMAIGAVLGLSGIKGOSMDQDKIKL 82
DB 62 VGTGGGALGGIAGSTIGGGRGQAIAAVGAIGATGATGSKIEKMSQVNGAEI 114

RESULT 15

YCFJ_ECOLI
ID YCFJ_ECOLI STANDARD: PRT; 179 AA.
AC P37796; P75951;
DT 01-OCT-1994 (Rel. 30, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 15-JUN-2002 (Rel. 41, Last annotation update)
DE Hypothetical protein ycfJ.
GN YCFJ OR B1110.
OS Escherichia coli.
OC Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae;
OC Escherichia.
OX NCBI_TaxID=562;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-K12 / MG1655;
RX MEDLINE=97426617; PubMed=9278503;
RA Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V.,
RA Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F.,
RA Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
RA Mau B., Shao Y.;
RT "The complete genome sequence of Escherichia coli K-12.";
RL Science 277:1453-1474(1997).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN-K12;
RX MEDLINE=97061202; PubMed=8905232;
RA Oshima T., Aiba H., Baba T., Fujita K., Hayashi K., Honjo A.,
RA Ikemoto K., Inada T., Itoh T., Kajihara M., Kanai K., Kashimoto K.,
RA Kimura S., Kitagawa M., Makino K., Masuda S., Miki T., Mizobuchi K.,
RA Mori H., Motomura K., Nakamura Y., Nishimoto H., Nishio Y., Saito N.,
RA Sempel G., Seki Y., Tagami H., Takemoto K., Wada C., Yamamoto Y.,
RA Yano M., Horiuchi T.;
RT "A 718-kb DNA sequence of the Escherichia coli K-12 genome
corresponding to the 12.7-28.0 min region on the linkage map.";
RL DNA Res. 3:137-155(1996).
RN [3]
RP SEQUENCE OF 1-63 FROM N.A.
RC STRAIN-K12;
RX MEDLINE=81236546; PubMed=6265208;
RA Young J.G., Rogers B.L., Campbell H.D., Jaworski A., Shaw D.C.;
RT "Nucleotide sequence coding for the respiratory NADH dehydrogenase of
Escherichia coli. UUG initiation codon.";
RL Eur. J. Biochem. 116:165-170(1981).
RN [4]
RP IDENTIFICATION.
RX MEDLINE=95075659; PubMed=7984428;
RA Borodovsky M., Rudd K.E., Koonin E.V.;
RT "Intrinsic and extrinsic approaches for detecting genes in a
bacterial genome.";
RL Nucleic Acids Res. 22:4756-4767(1994).
CC -1- SIMILARITY: TO RICKETTSIA 17 kDa SURFACE ANTIGEN.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL: AE000211; AAC74194.1;
DR EMBL: D90746; BAA35925.1;
DR EMBL: V00306; -; NOT_ANNOTATED_CDS.
DR Ecogene: EG12444; ycfJ.

KW Hypothetical protein: Transmembrane: Complete proteome.
FT TRANSMEM 5 POTENTIAL.
SQ SEQUENCE 179 AA; 18920 MW; BAE80DB56D45609 CRC64;

Query Match 11.8%; Score 99; DB 1; Length 179;
Best Local Similarity 27.1%; Pred. No. 0.079;
Matches 26; Conservative 12; Mismatches 32; Indels 26; Gaps 1;

QY 31 GAATGAVGVAGOLFPGKSGRVAMAIGAVLGLSGIKGOSMDQDKIKLNSLEKVK 90
DB 73 GSVLGAVAGVIGHQFPGGGRGDVATVVGALGGYAGNQLQSLQESD----- 120
QY 91 AGQVTRMRNPDTGNSYSVEPVRTQRYNKOERROQY 126
DB 121 -----TYYTTOQRCKTVYDKSEKMLGY 142

Search completed: February 12, 2003, 16:44:11
Job time : 52 secs

A:Molecule type: DNA
A:Residues: 1-155 <BAE>
A:Cross-references: EMBL:X60448; NID:948577; PIDN:CAA42977.1; PID:948579
C:Superfamily: PAL cross-reacting lipoprotein

Query Match 13.6%; Score 113.5; DB 2; Length 155;
Best Local Similarity 24.7%; Pred. No. 0.007;
Matches 37; Conservative 19; Mismatches 43; Indels 51; Gaps 4;

QY 10 SLIIISVFLVGAQN-----FSRQE-----VGAT 34
DB 7 AVALAVTLTGCAANNLTSGDVFSAQKQVTVYTGILLSVPVLTIGGDDNNVMGAIG 66
QY 35 GAVGVGAVGOLFPGKSGRVAMAGAVLGLIGSKIGSQMPQODKIKL----- 82
DB 67 GAVLGGFLGNFVGGGTGSLATAGAVAGMAGCGVCGAMRTDGVQLEVRKDDGTTILV 126
QY 83 --NQLSEVKAKQVTRWRNPTGNSYSEP 110
DB 127 VQKQPTRESVGQ--RVMLASSGTIVSP 154

RESULT 11

B82837
Conserved hypothetical protein XP0178 [imported] - Xylella fastidiosa (strain 9a5c)
C:Species: Xylella fastidiosa
C:Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 20-Aug-2000
C:Accession: B82837

R:Anonymous: The Xylella fastidiosa Consortium of the Organization for Nucleotide Sequences
A:Title: The genome sequence of the plant pathogen Xylella fastidiosa.
A:Reference number: A82515; MUID:20365717; PMID:10910347

A:Note: for a complete list of authors see reference number A59328 below
A:Accession: B82837

A:Status: preliminary
A:Molecule type: DNA

A:Residues: 1-257 <SIM>

A:Cross-references: GB:AE003872; GB:AE003849; NID:9104975; PIDN:AAF82991.1; GSPDB:GN001
A:Experimental source: strain 9a5c

R:Simpon, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvaenga, R.; Brites, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carter, H. as-Melo, E.; Docena, C.; El-Dorri, H.; Facinca, A.P.; Ferreira, A.J.S.
Submitted to Genbank, June 2000

A:Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; Frohm, J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Laig, Chado, M.A.; Madeira, A.M.B.N.; Madeira, H.M.F.; Marino, C.L.; Marques, M.V.; Martins, F.; F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, R.C.; Miyaki, C.Y.; Rodrigues, V.; Rosa, A.J. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sawasak, M.; Tshahko, M.H.; Vallada, H.; Van Sluys, M.A.; Verjovski-Almeida, S.; Vettore, A.L.; Z
A:Reference number: A59328
A:Contents: annotation
C:Genetics:

A:Gene: XP0178

Query Match 13.4%; Score 112; DB 2; Length 257;
Best Local Similarity 50.0%; Pred. No. 0.016;

Matches 20; Conservative 8; Mismatches 12; Indels 0; Gaps 0;

QY 31 GAATGAVGVAGOLFPGKSGRVAMAGAVLGLIGSK 70
DB 105 GTATGALIGLVGNQFGHGRKALTAGAVAGGTIGNEV 144

RESULT 12

AD2696

lipA protein [imported] - Agrobacterium tumefaciens (strain C58, Dupont)

C:Species: Agrobacterium tumefaciens

C:Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 11-Jan-2002

C:Accession: AD2696

R:Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, Y.; Woo, I. erage, G.; Gillet, W.; Grant, C.; Guenther, D.; Kutyavin, T.; Levy, R.; Li, M.; McClellan

; Karp, P.; Romero, P.; Zhang, S.
Science 294, 2317-2323, 2001
A:Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kam
ster, E.W.

A:Title: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens C58.
A:Reference number: AB2577; PMID:11743193

A:Accession: AD2696

A:Status: preliminary

A:Molecule type: DNA

A:Residues: 1-142 <KUR>

A:Cross-references: GB:AE008688; PIDN:AAL41986.1; PID:917739358; GSPDB:GN00186

A:Experimental source: strain C58 (Dupont)

C:Genetics:

A:Gene: lipA

A:Map position: circular chromosome

Query Match 13.3%; Score 111.5; DB 2; Length 142;
Best Local Similarity 27.2%; Pred. No. 0.0096;
Matches 41; Conservative 21; Mismatches 60; Indels 29; Gaps 9;

QY 10 SLIIISVFLVGAQNFSRQEVGAATGAVGVAGOLFPGKSGRVAMAGAVLGLIGSK 69
DB 12 SILCVSW-LSAC-----TTGTNRAC--GSLFGR-SAQPTPLANIGGIVG-K 56

QY 70 IGSMQODKIKL-----NQLSEVKAKQVTRWRNPT--GNSYSEVRYRYRNKORRQ 124
DB 57 SGVELDGGDTKALEEYKALETAPVGTPIVMTGDDVKQGVANAP---YQVGN----- 107

QY 125 QYCEFFQKAMIAQOKOEIYGTACROPDGRW 155

DB 108 QNCROYSHITLVTDGRTRVRGAACRNDGWSW 138

RESULT 13

D97478

lipA protein [imported] - Agrobacterium tumefaciens (strain C58, Cereon)

C:Species: Agrobacterium tumefaciens

C:Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 11-Jan-2002

C:Accession: D97478

R:Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; Blanchard, M.; Qurollo, B.; Goldm
A.; Liu, F.; Wolim, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz,
Science 294, 2323-2328, 2001

A:Title: Genome Sequence of the Plant Pathogen and Biotechnology Agent Agrobacterium
A:Reference number: A97359; PMID:11743194

A:Accession: D97478

A:Status: preliminary

A:Molecule type: DNA

A:Residues: 1-125 <KOR>

A:Cross-references: GB:AE007869; PIDN:AAK86781.1; PID:915155981; GSPDB:GN00169

C:Genetics:

A:Gene: AGR C.1782

A:Map position: circular chromosome

Query Match 13.3%; Score 111; DB 2; Length 125;
Best Local Similarity 27.5%; Pred. No. 0.0093;
Matches 36; Conservative 18; Mismatches 61; Indels 16; Gaps 6;

QY 30 VCAATGAVGVAGOLFPGKSGRVAMAGAVLGLIGSKISQSDQDQDKIKL-----NQS 85
DB 2 LSACTTTGTRPAGSLFGR-SAQPTPLANIGGIVG-KSGVELDRDQTKALEAEYKA 59

QY 86 LEKRVAGQVTRWRNPT--GNSYSEVRYRYRNKORRQYCEFFQKAMIAQOKOEIY 144
DB 60 LETAPVGTPIVMTGDDVAGQVANAP---YQVGN-----QNCROYSHITLVTDGRDTRVR 110

QY 145 GTACROPDGRW 155

DB 111 GAACRNDGWSW 121

RESULT 14

S58234

lipA protein - Rhizobium leguminosarum

THIS PAGE BLANK (USPTO)

GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: February 12, 2003, 16:34:58 (Search time 36 Seconds
(without alignments)
599.628 Million cell updates/sec

Title: US-09-677-374-2

Perfect score: 836
1 MNRCLGSLIITVFLV.....IYGTACRQPDGRWCVSTPK 162

Sequence:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Scoring table:

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database :

Listing first 45 summaries

1: /SID2/gcgdata/geneseq/geneseq-emb1/AA1980.DAT.*
2: /SID2/gcgdata/geneseq/geneseq-emb1/AA1981.DAT.*
3: /SID2/gcgdata/geneseq/geneseq-emb1/AA1982.DAT.*
4: /SID2/gcgdata/geneseq/geneseq-emb1/AA1983.DAT.*
5: /SID2/gcgdata/geneseq/geneseq-emb1/AA1984.DAT.*
6: /SID2/gcgdata/geneseq/geneseq-emb1/AA1985.DAT.*
7: /SID2/gcgdata/geneseq/geneseq-emb1/AA1986.DAT.*
8: /SID2/gcgdata/geneseq/geneseq-emb1/AA1987.DAT.*
9: /SID2/gcgdata/geneseq/geneseq-emb1/AA1988.DAT.*
10: /SID2/gcgdata/geneseq/geneseq-emb1/AA1989.DAT.*
11: /SID2/gcgdata/geneseq/geneseq-emb1/AA1990.DAT.*
12: /SID2/gcgdata/geneseq/geneseq-emb1/AA1991.DAT.*
13: /SID2/gcgdata/geneseq/geneseq-emb1/AA1992.DAT.*
14: /SID2/gcgdata/geneseq/geneseq-emb1/AA1993.DAT.*
15: /SID2/gcgdata/geneseq/geneseq-emb1/AA1994.DAT.*
16: /SID2/gcgdata/geneseq/geneseq-emb1/AA1995.DAT.*
17: /SID2/gcgdata/geneseq/geneseq-emb1/AA1996.DAT.*
18: /SID2/gcgdata/geneseq/geneseq-emb1/AA1997.DAT.*
19: /SID2/gcgdata/geneseq/geneseq-emb1/AA1998.DAT.*
20: /SID2/gcgdata/geneseq/geneseq-emb1/AA1999.DAT.*
21: /SID2/gcgdata/geneseq/geneseq-emb1/AA2000.DAT.*
22: /SID2/gcgdata/geneseq/geneseq-emb1/AA2001.DAT.*
23: /SID2/gcgdata/geneseq/geneseq-emb1/AA2002.DAT.*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	836	100.0	162	22	AAAG78025
2	836	100.0	162	23	AAAB81126
3	836	100.0	162	23	AAU97867
4	815	97.5	161	22	AAAB81127
5	815	97.5	161	23	AAU97868
6	815	97.5	256	22	AAAB81128
7	815	97.5	256	23	AAU97869
8	112	13.4	20	22	AAAB81130
9	112	13.4	20	23	AAU97871
10	108	12.9	197	23	AA017565

11	108	12.9	224	22	AAB20105
12	105.5	12.6	223	20	AAV34487
13	105.5	12.6	230	20	AAV34362
14	102	12.2	154	11	AAAR05799
15	98	11.7	309	22	ABG15906
16	91	10.9	528	22	AAAB82611
17	86.5	10.3	2309	22	ABAB6232
18	82	9.8	666	22	ABBS6019
19	81.5	9.7	651	20	AAV40097
20	81.5	9.7	651	23	AAU17781
21	81.5	9.7	718	12	AAAR1308
22	81.5	9.7	718	19	AAAR5346
23	81.5	9.7	718	21	AAV59070
24	80.5	9.6	102	22	AAAM4943
25	80.5	9.6	170	22	ABP37981
26	80.5	9.6	302	22	AAAM4157
27	80.5	9.6	302	23	AAU74394
28	80.5	9.6	318	22	ABP37982
29	80.5	9.6	542	22	ABBS6790
30	80.5	9.6	542	22	ABBS6791
31	80.5	9.6	542	22	ABBY70501
32	80.5	9.6	1640	23	ABBS4727
33	80	9.6	116	19	AAV11028
34	80	9.6	2017	22	ABG06301
35	80	9.6	2599	21	AAV75098
36	79	9.4	112	23	ABP28121
37	79	9.4	618	21	ABBS6803
38	78.5	9.4	581	23	ABP28639
39	78	9.3	104	23	AAAM5034
40	78	9.3	137	23	AAAM5036
41	78	9.3	219	23	AAAM5040
42	78	9.3	230	23	AAAM5035
43	78	9.3	264	23	AAAM5048
44	78	9.3	271	23	AAAM5044
45	78	9.3	364	23	AAAM5043

ALIGNMENTS

RESULT 1	
AAAG78025	standard; Protein: 162 AA.
AC	AAAG78025;
DT	15-JAN-2002 (first entry)
DE	Piscirickettsia salmonis polypeptide P10.6.
XX	
XX	Piscirickettsia salmonis; Piscirickettsiosis; salmonid rickettsial;
KW	septicemia; SRS; surface antigen; vaccine; antibacterial; fish;
KW	ATCC VR-1361.
XX	
XX	Piscirickettsia salmonis.
OS	
PN	WO20016865-A2.
XX	
PD	20-SEP-2001.
XX	
PF	12-MAR-2001; 2001WO-GB01055.
XX	
PR	11-MAR-2000; 2000GB-0005838.
PR	01-JUL-2000; 2000GB-0016080.
PR	29-JUL-2000; 2000GB-0016082.
XX	
PA	(AQUA-) AQUA HEALTH EURO LTD.
XX	
PI	Simard N, Brouwers H, Jones S, Griffiths S, Valenzuela P;
PI	Burzio L;
XX	
DR	WPI, 2001-639050/73.

Moraxella catarrha
Porphyromonas ging
Porphyromonas ging
PBOP-2 gene prod.
Novel human diagno
Spider recombinant
Drosophila melanog
Drosophila melanog
Spider silk proteol
Spider natural sil
N.clavipes draglin
Nephila clavipes s
N. clavipes spider
Human polypeptide
Human GS930284 pro
Human polypeptide
Human ovarian tumo
Human GS930284 pro
Drosophila melanog
Drosophila melanog
Lactococcus lactis
H. pylori ORF 01CP
Novel human diagno
Streptococcus men
Human prostate can
Streptococcus poly
N. clavipes spidro
N. clavipes spidro
N. clavipes spidro
N. clavipes spidro
N. clavipes spidro
N. clavipes spidro

DR N-PSDB; AAF79040.

XX New nucleic acids encoding an amino acid sequence homologous to the
PT surface antigen present on *Piscirickettsia salmonis* are useful to
PT protect fish against *Piscirickettsiosis* -
XX

PS Claim 6; Fig 5; 25pp; English.

XX The invention relates to nucleic acid sequences and the encoded protein
CC of a least part of the surface antigen present on *Piscirickettsia*
CC salmonis for production of a vaccine with antibacterial activity to
CC protect fish against *P. salmonis* which causes *Piscirickettsiosis*, also
CC known as salmonid rickettsial septicemia.
XX

Sequence 162 AA:

Query Match 100.0%; Score 836; DB 22; Length 162;
Best Local Similarity 100.0%; Pred. No. 3.8e-80;
Matches 162; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

QY 1 MNRGCLGSSSLIIISVFLVGCANFNSRQEVGAATGAVGVAGQLFGKSGRYAMATGA 60
   |||||||
Db 1 MNRGCLGSSSLIIISVFLVGCANFNSRQEVGAATGAVGVAGQLFGKSGRYAMATGA 60
   |||||||
QY 61 VLGGLIGSKTIGQSMDOODKIKLNOSLEKVKAGQVTRMRNPDGNSYSVEPRTYORYNKQ 120
   |||||||
Db 61 VLGGLIGSKTIGQSMDOODKIKLNOSLEKVKAGQVTRMRNPDGNSYSVEPRTYORYNKQ 120
   |||||||
QY 121 ERROQYCREFOOKAMTAGOKOKEIYGTACROPDGRMOWISTEK 162
   |||||||
Db 121 ERROQYCREFOOKAMTAGOKOKEIYGTACROPDGRMOWISTEK 162
   |||||||

```

RESULT 2

ID AAB81126 standard; Protein; 162 AA.

XX AAB81126;

DT 11-JUL-2001 (first entry)

DE OSPA antigen amino acid sequence.

KW Polkiothermic fish; *Piscirickettsia salmonis*; rickettsial pathogen;
KM vaccine; Ospa; salmonid rickettsial septicemia; rickettsial disease;
XX

OS *Piscirickettsia salmonis*.

FT Key Location/Qualifiers
FT Region 110..129
XX /label=B_cell_epitope

CA2281913-A1.

PD 17-MAR-2001.

PF 17-SEP-1999; 99CA-2281913.

PR 17-SEP-1999; 99CA-2281913.

PA (KAYW/) KAY W W.
PA (BURI/) BURIAN J.
PA (KUZV/) KUZIK M A.
XX

PI Kay WW, Burian J, Kuzik MA;

DR WPI; 2001-316844/34.

DR N-PSDB; AAF86246.

PT Method for protecting polkiothermic fish against salmonid rickettsial
PT septicemia and other rickettsial diseases comprises administering a
XX vaccine containing the Ospa protein of *Piscirickettsia salmonis* -

XX Example 2; Fig 2B; 35pp; English.

PS This invention relates to a method for the protection against infection
CC of a polkiothermic fish by the bacterial pathogen, *Piscirickettsia*
CC salmonis. The method comprises administering an immunogenic amount of a
CC *P. salmonis* specific antigen termed Ospa, or an immunogenic fragment of a
CC Ospa in the form of a vaccine. The method is used for protecting animals,
CC particularly polkiothermic fish, against the bacterial pathogen
CC *P. salmonis*. The method is also useful for protecting against salmonid
CC rickettsial septicemia (SRS) and other rickettsial diseases. The present
CC sequence represents *P. salmonis* Ospa protein. An Ospa protein with an
CC N-terminal fusion partner is used in a vaccine to create an anti-Ospa
XX antibody response.

Sequence 162 AA:

Query Match 100.0%; Score 836; DB 22; Length 162;
Best Local Similarity 100.0%; Pred. No. 3.8e-80;
Matches 162; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

QY 1 MNRGCLGSSSLIIISVFLVGCANFNSRQEVGAATGAVGVAGQLFGKSGRYAMATGA 60
   |||||||
Db 1 MNRGCLGSSSLIIISVFLVGCANFNSRQEVGAATGAVGVAGQLFGKSGRYAMATGA 60
   |||||||
QY 61 VLGGLIGSKTIGQSMDOODKIKLNOSLEKVKAGQVTRMRNPDGNSYSVEPRTYORYNKQ 120
   |||||||
Db 61 VLGGLIGSKTIGQSMDOODKIKLNOSLEKVKAGQVTRMRNPDGNSYSVEPRTYORYNKQ 120
   |||||||
QY 121 ERROQYCREFOOKAMTAGOKOKEIYGTACROPDGRMOWISTEK 162
   |||||||
Db 121 ERROQYCREFOOKAMTAGOKOKEIYGTACROPDGRMOWISTEK 162
   |||||||

```

RESULT 3

AAU97867

ID AAU97867 standard; Protein; 162 AA.

XX AAU97867;

DT 12-AUG-2002 (first entry)

DE *Piscirickettsia salmonis* outer surface lipoprotein Ospa.

KW Outer surface lipoprotein; Ospa; antibacterial; immunosuppressive;
KM vaccine; polkiothermic fish; fin-fish; Rickettsial septicemia;
XX Rickettsial disease.

OS *Piscirickettsia salmonis*.

CA2339327-A1.

PD 15-MAR-2002.

PF 19-MAR-2001; 2001CA-2339327.

PR 15-SEP-2000; 2000US-0677374.

PA (THOR/) THORNTON J C.
PA (KAYW/) KAY W W.
PA (BURI/) BURIAN J.
PA (KUZV/) KUZIK M A.
XX

PI Thornton JC, Kay WW, Burian J, Kuzik MA;

DR WPI; 2002-455221/49.

DR N-PSDB; ABK52401.

PT Inducing immunity in fin fish to Rickettsial septicemia, comprises
PT administration of an outer surface lipoprotein (Ospa) of a bacterial
XX strain, as a vaccine -
XX Claim 15; Fig 2; 55pp; English.

XX The invention describes a method of protecting a poikilothermic fish
 CC against infection by the bacterial pathogen *Piscirickettsia salmonis*
 CC comprising administering either intraperitoneally, by immersion or
 CC orally, an immunogenic amount of principal antigen, the Ospa (outer
 CC surface lipoprotein), its variants, non-lipidated form or antigenic
 CC peptides derived or synthesized with or without an adjuvant. The new
 CC method is used to provide an outer surface lipoprotein (Ospa) of
 CC bacterial strain *Piscirickettsia salmonis* as a vaccine to induce immunity
 CC in fin-fish against *Rickettsial* septicaemia and other related
 CC *Rickettsial* diseases caused by either a virus, bacteria or parasite.
 CC This is the amino acid sequence of the *Piscirickettsia salmonis* outer
 CC surface lipoprotein, Ospa, used in the creation of the vaccine described
 CC in the invention.
 CC
 XX Sequence 162 AA:
 SQ
 Query Match 100.0%; Score 836; DB 23; Length 162;
 Best Local Similarity 100.0%; Pred. No. 3.8e-80;
 Matches 162; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 OY 1 NMKGLOGSSLIITISVFLVGCANFNSROEVGATGAVGVAGOLFPGKSGRVAMAIGA 60
 DB 1 NMKGLOGSSLIITISVFLVGCANFNSROEVGATGAVGVAGOLFPGKSGRVAMAIGA 60
 OY 61 VLGGLIGSKIGSMQODKIKLNOSLEKVKAGQVTRMRNPDTGNSYSEVPRTYQRYNKO 120
 DB 61 VLGGLIGSKIGSMQODKIKLNOSLEKVKAGQVTRMRNPDTGNSYSEVPRTYQRYNKO 120
 OY 121 ERROQCREFOOKAMIAQOKOETGTACROPDGRMOVISTEK 162
 DB 121 ERROQCREFOOKAMIAQOKOETGTACROPDGRMOVISTEK 162
 RESULT 4
 AAB81127
 ID AAB81127 standard; Protein: 161 AA.
 AC AAB81127;
 XX 11-JUL-2001 (first entry)
 DE Optimised Ospa protein 17E2 amino acid sequence.
 KW Poikilothermic fish; *Piscirickettsia salmonis*; rickettsial pathogen;
 KM vaccine: Ospa; salmonid rickettsial septicaemia; rickettsial disease;
 OS SRS.
 XX *Piscirickettsia salmonis*.
 OS Synthetic.
 FH Key Location/Qualifiers
 FT Region 109..128
 FT /label= B_cell_epitope
 CA2281913-A1.
 PN 17-MAR-2001.
 PD 17-SEP-1999; 99CA-2281913.
 PF 17-SEP-1999; 99CA-2281913.
 PR 17-SEP-1999; 99CA-2281913.
 XX (KAWW/) KAY W W.
 PA (BURI/) BURIAN J.
 PA (KUZV/) KUZV M A.
 XX
 PI Kay WW, Burian J, Kuzv MA;
 DR WPI: 2001-316844/34.
 DR N-PSDB: AAF86247.
 XX
 PT Method for protecting poikilothermic fish against salmonid rickettsial

PT septicemia and other rickettsial diseases comprises administering a
 XX vaccine containing the Ospa protein of *Piscirickettsia salmonis*
 PS Disclosure: Fig 5; 35pp; English.
 XX
 XX This invention relates to a method for the protection against infection
 CC of a poikilothermic fish by the bacterial pathogen, *Piscirickettsia*
 CC *salmonis*. The method comprises administering an immunogenic amount of a
 CC *P. salmonis* specific antigen termed Ospa, or an immunogenic fragment of
 CC Ospa in the form of a vaccine. The method is used for protecting animals,
 CC particularly poikilothermic fish, against the bacterial pathogen
 CC *P. salmonis*. The method is also useful for protecting against salmonid
 CC rickettsial septicaemia (SRS) and other rickettsial diseases. The present
 CC sequence represents optimised *P. salmonis* Ospa protein 17E2. The DNA
 CC encoding Ospa 17E2 (AA86247) has been optimised for expression in
 CC *Escherichia coli*. An Ospa protein with an N-terminal fusion partner is
 CC used in a vaccine to create an anti-Ospa antibody response.
 CC
 XX Sequence 161 AA:
 SQ
 Query Match 97.5%; Score 815; DB 22; Length 161;
 Best Local Similarity 98.8%; Pred. No. 6.2e-78;
 Matches 158; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 OY 3 RCGLOGSSLIITISVFLVGCANFNSROEVGATGAVGVAGOLFPGKSGRVAMAIGA 62
 DB 2 RCGLOGSSLIITISVFLVGCANFNSROEVGATGAVGVAGOLFPGKSGRVAMAIGA 61
 OY 63 GGLIGSKIGSMQODKIKLNOSLEKVKAGQVTRMRNPDTGNSYSEVPRTYQRYNKOER 122
 DB 62 GGLIGSKIGSMQODKIKLNOSLEKVKAGQVTRMRNPDTGNSYSEVPRTYQRYNKOER 121
 OY 123 ROQYCREFOOKAMIAQOKOETGTACROPDGRMOVISTEK 162
 DB 123 ROQYCREFOOKAMIAQOKOETGTACROPDGRMOVISTEK 161
 RESULT 5
 AAU97868
 ID AAU97868 standard; Protein: 161 AA.
 AC AAU97868;
 XX 12-AUG-2002 (first entry)
 DE *Escherichia coli* codon optimised Ospa, 17E2.
 KW *Escherichia coli* codon optimised Ospa, 17E2.
 DE
 XX Outer surface lipoprotein; Ospa; antibacterial; immunosuppressive;
 KM vaccine: poikilothermic fish; fin-fish; rickettsial septicaemia;
 KM rickettsial disease; 17E2.
 XX *Piscirickettsia salmonis*.
 OS Synthetic.
 OS
 FH Key Location/Qualifiers
 FT Region 109..128
 FT /label= B_cell_epitope
 CA2339327-A1.
 PN 15-MAR-2002.
 PD 19-MAR-2001; 2001CA-2339327.
 PF 15-SEP-2000; 2000US-0677374.
 PR 15-SEP-2000; 2000US-0677374.
 XX (THOR/) THORNTON J C.
 PA (KAWW/) KAY W W.
 PA (BURI/) BURIAN J.
 PA (KUZV/) KUZV M A.
 XX
 PI Thornton JC, Kay WW, Burian J, Kuzv MA;
 DR WPI: 2002-455221/49.
 DR N-PSDB: ABK52402.
 XX
 PT Inducing immunity in fin fish to rickettsial septicaemia, comprises

Query Match	97.5%	Score 815;	DB 23;	Length 161;
Best Local Similarity	98.8%	Pred. No. 6.2e-78;		
Matches 158;	Conservative 1;	Mismatches 1;	Indels 0;	Gaps 0;

	Indels	Gaps
QY 3 RGLGGSSLIITISVPLVYCAONFSPQEVGAATGAVGVAGOLFEKGSGRVMAIGCAVL	62	
Db 2 RGLGGSSLIITISVPLVYCAONFSPQEVGAATGAVGVAGOLFEGKGSGRVMAIGCAVL	61	
QY 63 GGLIGSKIGQSMDDQDKIKLNLSEKRVAGVQFRRNPDTGNSVSVEPRYYQRIKQER	122	
Db 62 GGLIGSKIGQSMDDQDKIKLNLSEKRVAGVQFRRNPDTGNSVSVEPRYYQRIKQER	121	
QY 123 RQCYCFEPOQKAMINGKQKQELTYGACQDPDGRQNVISTEK	162	
Db 122 RQCYCFEPOQKAMINGKQKQELTYGACQDPDGRQNVISTEK	161	

RESULT 6
AAB81128
ID AAB81128 standard; Protein; 256 AA.
XX
AC AAB81128;
XX
DT 11-JUL-2001 (first entry)
XX
DE C17E2 Ospa construct with N-terminal fusion partner.
XX
KW Poliothermic fish; Piscirickettsia salmonis; rickettsial pathogen;
KM vaccine; Ospa; salmonid rickettsial septicemia; rickettsial disease;
SRS_17E2; fusion construct.

Synthetic.

key	Location/Qualifiers
Region	1..95
Region	/label= Undefined_N-terminal_fusion_partner
Region	96..256
Region	/label= C17E2.OsPa
Region	/note= "Product of OsPa gene optimised for expression in Escherichia coli."

PN	CA2281913-A1.
XX	
PD	17-MAR-2001.
XX	
PF	17-SEP-1999;
XX	
PR	17-SEP-1999;
XX	
PA	(KAYW/) KAY W
PA	(BURI/) BURIA

PA (KUZY/) KUZYZK M A.
XX
PI Kay WW, Burian J, Kuzyzk MA,
XX
DR WPI; 2001-316844/34.
DR N-PDSB; AA86248.

PT Method for protecting polkilotheimic fish against salmonid rickettsial
PT septicemia and other rickettsial diseases comprises administering a
XX vaccine containing the Ospa protein of *Piscirickettsia salmonis* -
PS
XX Example 4, Fig 5; 35pp; English.

This invention relates to a method for the protection against infection of a poikilothermic fish by the bacterial pathogen, *Piscirickettsia salmonis*. The method comprises administering an immunogenic amount of a *P. salmonis* specific antigen termed *OsPa*, or an immunogenic fragment of *OsPa* in the form of a vaccine. The method is used for protecting animals, particularly poikilothermic fish, against the bacterial pathogen *P. salmonis*. The method is also useful for protecting against salmonid rickettsial septicemia (SFS) and other rickettsial diseases. The present sequence represents the amino acid sequence of C17E2, a *P. salmonis* *OsPa* construct optimised for expression in *Escherichia coli*, fused to an undefined N-terminal fusion partner. The fusion protein is used in a vaccine to create an anti-*OsPa* antibody response.

Query Match	97.5%	Score 815	DB 22	Length 256
Best Local Similarity	98.8%	Pred. No. 1,1e-77		
Matches 158	Conservative 1	Mismatches 1	Indels 0	Gaps 0

QY	3	RGLQSSLLIIISVFLWCAONFSEBOEAGATGAVVGGVAGOLFEKGSORVMATIGAVL	62
Db	97	RGLQSSLLIIISVFLWCAONFSEBOEAGATGAVVGGVAGOLFEKGSORVMATIGAVL	156
QY	63	GGIGSGTGGSDODDKIKLNSLEKAKAGVTRWRNPDTGNSVSEVPRTYQRYNKOER	122
Db	157	GGIGSGTGGSDODDKIKLNSLEKAKAGVTRWRNPDTGNSVSEVPRTYQRYNKOER	216
QY	123	ROQYCREFOOKAMIGAKOEIETGACQDPGGRMOWISTEK	162
Db	217	ROQYCREFOOKAMIGAKOEIETGACQDPGGRMOWISTEK	256

RESULT 7	
AAU97869	
ID	AAU97869
XX	standard; Protein; 256 AA
AC	AAU97869;

DT 12-AUG-2002 (first entry)
 YY

xx Colloidal optimised OSPA17ez with N-terminal fusion peptide
xx
xx Outer surface lipoprotein, OSPA; antibacterial; immunosuppressive;
xx vaccine; polioinfectious fish; fin-fish; Rickettsial septicaemia;
xx Rickettsial disease; 17ez.
xx
xx *Rickettsia salmonis*.
xx
xx Synthetic.

PN CA2339327-A1.

PD 15-MAR-2002.

19-MAR-2001; 2001CA-2339327.

PR 15-SEP-2000; 2000US-0677374.

PA (THOR/) THORNTON J C.

(BURI/) BURIAN J.

PA (KUZT/) KUZTK M A.
 XX
 PI Thornton JC, Kay MW, Burian J, Kuzyk MA;
 XX
 DR WPI; 2002-455221/49.
 DR N-PSDB; ABR52403.
 XX
 PT Inducing immunity in fin fish to Rickettsial septicaemia, comprises
 PT administration of an outer surface lipoprotein (Ospa) of a bacterial
 PT strain, as a vaccine -
 XX
 PS Example 4; Fig 5; 55pp; English.
 XX
 CC The invention describes a method of protecting a polkithohermic fish
 CC against infection by the bacterial pathogen Piscirickettsia salmonis
 CC comprising administering either intraperitoneally, by immersion or
 CC orally, an immunogenic amount of principal antigen, the Ospa (outer
 CC surface lipoprotein), its variants, non-lipidated form or antigenic
 CC peptides derived or synthesized with or without an adjuvant. The new
 CC method is used to provide an outer surface lipoprotein (Ospa) of
 CC bacterial strain Piscirickettsia salmonis as a vaccine to induce immunity
 CC in fin-fish against Rickettsial septicaemia and other related
 CC Rickettsial diseases caused by either a virus, bacteria or parasite.
 CC This is the amino acid sequence of the Escherichia coli codon optimised
 CC outer surface lipoprotein Ospa (117e2) with an N-terminal fusion used in
 CC the creation of the vaccine described in the invention.
 CC
 SQ Sequence 256 AA;
 QY Query Match 97.5%; Score 815; DB 23; Length 256;
 DB Best Local Similarity 98.8%; Pred. No. 1.1e-77;
 Matches 158; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 OY 3 RCGLOSSLLITIVPLVGCNPFNRQEVGAATGAVNGVAGOLFPGSGRVAMATGAVL 62
 DB 97 RCGLOSSLLITIVPLVGCNPFNRQEVGAATGAVNGVAGOLFPGSGRVAMATGAVL 156
 OY 63 GGLIGSKTIGOSMDQDKIKINOSLEKVKAGQVTRWRNPDTGNSYSVEPVRYORYNKQER 122
 DB 157 GGLIGSKTIGOSMDQDKIKINOSLEKVKAGQVTRWRNPDTGNSYSVEPVRYORYNKQER 216
 OY 123 RQOYCREFOCKAMTACOKOETVGTACROPDGRNQVISTEK 162
 DB 217 RQOYCREFOCKAMTACOKOETVGTACROPDGRNQVISTEK 256
 RESULT 8
 AAB81130
 ID AAB81130 standard; Peptide; 20 AA.
 XX
 AC AAB81130;
 XX
 DT 11-JUL-2001 (first entry)
 XX
 DE Ospa B-cell epitope peptide #2.
 XX
 KW Polkithohermic fish; Piscirickettsia salmonis; rickettsial pathogen;
 KW vaccine; Ospa; salmonid rickettsial septicaemia; rickettsial disease;
 KW SRS; antibody.
 XX
 OS Piscirickettsia salmonis.
 XX
 PN CA2281913-A1.
 XX
 PD 17-MAR-2001.
 XX
 PF 17-SEP-1999; 99CA-2281913.
 XX
 PR 17-SEP-1999; 99CA-2281913.
 XX
 PA (KAYW/) KAY W W.
 PA (BURT/) BURIAN J.
 PA (KUZT/) KUZTK M A.

XX
 PI Kay MW, Burian J, Kuzyk MA;
 XX
 DR WPI; 2001-316844/34.
 XX
 PT Method for protecting polkithohermic fish against salmonid rickettsial
 PT septicaemia and other rickettsial diseases comprises administering a
 PT vaccine containing the Ospa protein of Piscirickettsia salmonis -
 XX
 PS Example 2; Page 17; 35pp; English.
 XX
 CC This invention relates to a method for the protection against infection
 CC of a polkithohermic fish by the bacterial pathogen, Piscirickettsia
 CC salmonis. The method comprises administering an immunogenic amount of a
 CC P. salmonis specific antigen termed Ospa, or an immunogenic fragment of
 CC Ospa in the form of a vaccine. The method is used for protecting animals,
 CC particularly polkithohermic fish, against the bacterial pathogen
 CC P. salmonis. The method is also useful for protecting against salmonid
 CC rickettsial septicaemia (SRS) and other rickettsial diseases. The present
 CC sequence represents an immunogenic epitope of the P. salmonis Ospa
 CC protein. The peptide is used to raise rabbit anti-Ospa antibodies.
 CC
 SQ Sequence 20 AA;
 QY Query Match 13.4%; Score 112; DB 22; Length 20;
 DB Best Local Similarity 100.0%; Pred. No. 5.9e-05;
 Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 OY 110 PVRTYORYNKQERRQOYCRE 129
 DB 1 PVRTYORYNKQERRQOYCRE 20
 RESULT 9
 AA097871
 ID AA097871 standard; Peptide; 20 AA.
 XX
 AC AA097871;
 XX
 DT 12-AUG-2002 (first entry)
 XX
 DE Outer surface lipoprotein Ospa based peptide #2.
 XX
 KW Outer surface lipoprotein; Ospa; antibacterial; immunosuppressive;
 KW vaccine; polkithohermic fish; fin-fish; Rickettsial septicaemia;
 KW Rickettsial disease.
 XX
 OS Piscirickettsia salmonis.
 OS Synthetic.
 OS
 PN CA2339327-A1.
 XX
 PD 15-MAR-2002.
 XX
 PF 19-MAR-2001; 2001CA-2339327.
 XX
 PR 15-SEP-2000; 2000US-0677374.
 XX
 PA (THOR/) THORNTON J C.
 PA (KAYW/) KAY W W.
 PA (BURT/) BURIAN J.
 PA (KUZT/) KUZTK M A.
 XX
 PI Thornton JC, Kay MW, Burian J, Kuzyk MA;
 XX
 DR WPI; 2002-455221/49.
 XX
 PT Inducing immunity in fin fish to Rickettsial septicaemia, comprises
 PT administration of an outer surface lipoprotein (Ospa) of a bacterial
 PT strain, as a vaccine -
 XX
 PS Example 2; Page 17; 55pp; English.
 XX

K
 S
 C
 F
 L

Matches	33	Conservative	33	Conservative

OY 13 IISVFLVGCANFSR-----QEVGATGAVVGGVAGOLFQKG--SGRVAMATGCAVIGGL 65
185 IISILPAKVAVDNSQNKRNAQAFGALIGAVAGCVIGHNVGSGNSGTTAGAVGGAGVAA 244
OY 66 IISKI-----GQSMQDQDKIKLNOGLEKVKAGQVT 95
245 AGSMVNDKTLMEGVSLTYKEGTQVYTSQVGEKEFOFT 281
Db

Search completed: February 12, 2003, 16:43:14
Job time : 38 secs

THIS PAGE BLANK (USPTO)

Db 491 QGAGAAAAAVGAGGEGIRGAGGAGGYGLGSGSGRGLGGGAGAGAAAAAGAGGAGG 550
QY 65 LIGSKTGO 72
Db 551 LGGGAGGQ 558

RESULT 2

US-09-247-806-1
; Sequence 1, Application US/09247806
; Patent No. 6280747
; GENERAL INFORMATION:
; APPLICANT: PHILIPPE, Michel
; APPLICANT: GARSON, Jean-Claude
; APPLICANT: ARRAUDEAU, Jean-Pierre
; TITLE OF INVENTION: COSMETIC OR DERMATOLOGICAL COMPOSITION CONTACTING AT
; TITLE OF INVENTION: LEAST ONE NATURAL OR RECOMBINANT SPIDER SILK OR AN
; FILE REFERENCE: 6386-0365-0
; CURRENT APPLICATION NUMBER: US/09/247,806
; EARLIER FILING DATE: 1999-02-11
; EARLIER APPLICATION NUMBER: FR 98/01614
; EARLIER FILING DATE: 1998-02-11
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 651
; TYPE: PRT
; ORGANISM: Nephila clavipes
US-09-247-806-1

Query Match

Best Local Similarity 9.7%; Score 81.5; DB 4; Length 651;
Matches 25; Conservative 3; Mismatches 17; Indels 23; Gaps 2;

QY 28 QEVGAATGAVG---GVAGQ-----LFKSGSGRYAMAIGAVLGG 64
Db 491 QGAGAAAAAVGAGGEGIRGAGGAGGYGLGSGSGRGLGGGAGAGAAAAAGAGGAGG 550
QY 65 LIGSKTGO 72
Db 551 LGGGAGGQ 558

RESULT 3

US-08-425-069-2
; Sequence 2, Application US/08425069
; Patent No. 5728810
; GENERAL INFORMATION:
; APPLICANT: Lewis, Randolph V.
; APPLICANT: Xu, Ming
; APPLICANT: Hinman, Michael B.
; TITLE OF INVENTION: ISOLATED DNA CODING FOR SPIDER SILK
; TITLE OF INVENTION: PROTEIN, A REPLICABLE VECTOR AND A TRANSFORMED CELL
; TITLE OF INVENTION: CONTAINING THE ISOLATED DNA, AND PRODUCTS THEREOF
; NUMBER OF SEQUENCES: 69
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Birch, Stewart, Kolasch & Birch
; STREET: 301 No. 5728810th Washington Street
; CITY: Falls Church
; STATE: Virginia
; COUNTRY: U.S.A.
; ZIP: 22046
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/425,069
; FILING DATE: 19-APR-1995
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:

NAME: Murphy Jr., Gerald M
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 1447-106P
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 205-8000
TELEFAX: (703) 205-8050
TELEX:
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 718 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-425-069-2

Query Match

Best Local Similarity 9.7%; Score 81.5; DB 1; Length 718;
Matches 25; Conservative 3; Mismatches 17; Indels 23; Gaps 2;

QY 28 QEVGAATGAVG---GVAGQ-----LFKSGSGRYAMAIGAVLGG 64
Db 491 QGAGAAAAAVGAGGEGIRGAGGAGGYGLGSGSGRGLGGGAGAGAAAAAGAGGAGG 550
QY 65 LIGSKTGO 72
Db 551 LGGGAGGQ 558

RESULT 4

US-08-317-844B-2
; Sequence 2, Application US/08317844B
; Patent No. 5989894

; GENERAL INFORMATION:
; APPLICANT: Lewis, Randolph V.
; APPLICANT: Xu, Ming
; APPLICANT: Hinman, Michael B.
; TITLE OF INVENTION: ISOLATED DNA CODING FOR SPIDER SILK
; TITLE OF INVENTION: PROTEIN, A REPLICABLE VECTOR AND A TRANSFORMED CELL
; TITLE OF INVENTION: CONTAINING THE ISOLATED DNA, AND PRODUCTS THEREOF
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Birch, Stewart, Kolasch & Birch
; STREET: 301 No. 5989894th Washington Street
; CITY: Falls Church
; STATE: Virginia
; COUNTRY: U.S.A.
; ZIP: 22046

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/317,844B
FILING DATE: 04-OCT-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Murphy Jr., Gerald M
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 1447-105P
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 241-1300
TELEFAX: (703) 241-2848
TELEX: 248345
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 718 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-317-844B-2

Query Match

9.7%; Score 81.5; DB 2; Length 718;

Thu Feb 13 14:53:26 2003

us-09-677-374-2.raii

Page 4

```

?
? CURRENT APPLICATION NUMBER: US/09/553,458
?
? CURRENT FILING DATE: 2000-04-20
?
? PRIOR APPLICATION NUMBER: EP99107412.1
?
? PRIOR FILING DATE: 1999-04-26
?
? NUMBER OF SEQ ID NOS: 10
?
? SEQ ID NO 8
?
? LENGTH: 255
?
? TYPE: prt
?
? ORGANISM: E. coli
?
? US-09-553-458-8

```

Query Match	9.38	Score	77.5	DB	4	Length	255
Best Local Similarity	20.98	Pred.	No.	0.73			
Matches	37	Conservative	28	Mismatches	81	Indels	31
						Gaps	7

```
QY 6 LGSSGLIIISVELVGCAGKNEFRGEVGATGAV----GYAAGOLFEGSGSRVMATGAV 61
      |||::||::||::||::||::||::||::||::||::||::||::||::||::||::||
Db 83 LQMTSLSREDPTAMMYCADYGAY-WGGGTIVTVSSGGGGSGGGSGGGSDIELTQSPAI 141
      ::||::||::||::||::||::||::||::||::||::||::||::||::||::||
QY 62 LGGLIGSKTIGGSMDQDKIK-LN-----QSLEKYAQGVTRMRNDPTGNSY 106
      :||::||::||::||::||::||::||::||::||::||::||::||::||::||
Db 142 MSASPGEEVYITTCASSSVIRIMNFQOKSGTSPRMVIYDTSKLSSGVAPARFSGSGETSY 2010
      ::||::||::||::||::||::||::||::||::||::||::||::||::||::||
QY 107 SVEEVRTARYRNKOECRRQQYCFREEFOQRAMI--AGOKOEIYGTCLROPDRGMÖVISTE 161
      |::||::||::||::||::||::||::||::||::||::||::||::||::||::||
Db 202 SL-----TISSAEADDAATYYCOOMSSNPILFTGACTKLTLRAAAEQ-----KLISEE 249
```

RESULT 8

; Sequence 8, Application US/09618869

```

? GENERAL INFORMATION:
? APPLICANT: Ambrosius, Dorthée
? APPLICANT: Rudolfph, Rainer
? APPLICANT: Schaeffner, Jeroeg
? APPLICANT: Schwarz, Elisabeth
? TITLE OF INVENTION: PROCES FOR THE PRODUCTION OF NATURALLY FOLDED AND
? TITLE OF INVENTION: SECRETED PROTEINS BY CO-SECRETION OF MOLECULAR
? FILE OF INVENTION: CHAPERONS
? FILE REFERENCE: 20381
? CURRENT APPLICATION NUMBER: US/09/618,869
? CURRENT FILING DATE: 2000-07-19
? PRIOR APPLICATION NUMBER: EP99114811.5
? PRIOR FILING DATE: 1999-07-29
? NUMBER OF SEQ ID NOS: 10
? SOFTWARE: PatentIn Ver. 2.1
? SEQ ID NO 8
? LENGTH: 255
? TYPE: PRT
? ORGANISM: Escherichia coli
? S-09-618-869-8

```

Query Match	9.38;	Score 77.5;	DB 4;	Length 255;
Best Local Similarity	20.08;	Prod No 0.73;		

Matches 37; Conservative 28; Mismatches 81; Indels 31; Gaps 7;

```

QY 6 LOGSSLLIIVFLVCAQNFSEROEGATGAVV-----GGVAGOLFPGKSGVMAIGAV 61
Db 83 LQMTLSRESDIYAMYCADDYGAV-WGQTTVTYVSGGGGGGGGGGGSDIETLQSPAI 144
QY 62 LGGILGSGGSMQDQKIK-LN-----QSLKVVAGOVTRRNRNDTGSY 166
Db 142 MSASGEAVVTTCASSSVRYRANPNFQKSGTSPKRWIYIDTSLKSSGVPARSGSGSGSY 201
QY 107 SVEPRTYQRINKQERROQYTRFEQQAAMI--AGOKELIYGTACRQPDGRQWIVSTE 161
Db 202 SL-----TTSMEADDAATYICQWSSNPLFFGAQTKELKRAAEQ-----KLISSE 249

```

RESULT 9
US-09-067-351-2
; Sequence 2, Application US/09067351

```

? Patent No. 5994081
? GENERAL INFORMATION:
? APPLICANT: Tang, Y. Tom
? APPLICANT: Hillman, Jennifer L.
? APPLICANT: Corley, Neil C.
? APPLICANT: Baughn, Mariah
? TITLE OF INVENTION: HUMAN KERATINS
? NUMBER OF SEQUENCES: 6
? CORRESPONDENCE ADDRESS:
? ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
? STREET: 3174 PORTER DRIVE
? CITY: PALO ALTO
? STATE: CALIFORNIA
? COUNTRY: USA
? ZIP: 94304
? COMPUTER READABLE FORM:
? MEDIUM TYPE: Floppy disk
? COMPUTER: IBM PC compatible
? OPERATING SYSTEM: PC-DOS/MS-DOS
? SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
? CURRENT APPLICATION DATA:
? APPLICATION NUMBER: US/09/067,351
? FILING DATE: Herewith
? CLASSIFICATION:
? ATTORNEY/AGENT INFORMATION:
? NAME: GERONE, MICHAEL C.
? REGISTRATION NUMBER: 39,132
? REFERENCE/DOCKET NUMBER: PF-0511 US
? TELECOMMUNICATION INFORMATION:
? TELEPHONE: (650) 855-0555
? TELEFAX: (650) 845-4166
? INFORMATION FOR SEQ ID NO: 2:
? SEQUENCE CHARACTERISTICS:
? LENGTH: 551 amino acids
? TYPE: amino acid
? STRANDEDNESS: single
? TOPOLOGY: linear
? IMMEDIATE SOURCE:
? LIBRARY: KERANOTO2
? CLONE: 2029060
US-09-067-351-2

Query Match          9.2% Score 77; DB 2; Length 551;
Best Local Similarity 22.4%, Pred. No. 2.3;
Matches 28; Conservative 28; Mismatches 53; Indels 16; Gaps 2;

QY      8 GSSLIIISVFVIGCAQNRSROEFGAATGAVVGAGVAGOLFEGKSGRGHAAVAGVGLIG 67
       111 : : : : : | : : : : : | : : : : : | : : : : : |
Db      54 GASFGSRSLYNLGGAKRRSLNCGSSCSGGRGSNSFGVNSG---FGYGGGVGGFSG 110
QY      68 SK-----IGSDMQDQDKIKINOSLEKYKAQVTRWRNPDTGNSYSVEPVRTY 114
       111 : : : : : | : : : : : | : : : : : | : : : : : |
Db      111 PSFPVCPGPGIQIEVTYVNSLLTPHLQLIDPIPTIQRVAEREEDQIKTLNNKFSTIDKVAF 170
       : : : : : | : : : : : | : : : : : | : : : : : |
QY      115 QRYNK 119
Db      171 EQQNK 175

RESULT 10
US-09-360-490-2
Sequence 2, Application US/09360490
Patent No. 6221843
GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
APPLICANT: Hillman, Jennifer L.
APPLICANT: Corley, Neil C.
APPLICANT: Baughn, Mariah
TITLE OF INVENTION: HUMAN KERATINS
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
STREET: 3174 PORTER DRIVE
```

```

: CITY: PALO ALTO
: STATE: CALIFORNIA
: COUNTRY: USA
: ZIP: 94304
:
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/09/360,490
: FILING DATE:
: CLASSIFICATION:
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: 09/067,351
: FILING DATE:
: ATTORNEY/AGENT INFORMATION:
: NAME: CERRONE, MICHAEL C.
: REGISTRATION NUMBER: 39,132
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: (650) 855-0555
: TELEFAX: (650) 845-4166
: INFORMATION FOR SEQ ID NO: 2:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 551 amino acids
: TYPE: amino acid
: STRANDEDNESS: single
: TOPOLOGY: linear
: IMMEDIATE SOURCE:
: LIBRARY: KERN002
: CLONE: 2029060
:
: US-09-360-490-2
:
: Query Match          9.2%; Score 77; DB 4; Length 551;
: Best Local Similarity 22.4%; Pred. No. 2.3;
: Matches 28; Conservative 28; Mismatches 53; Indels 16; Gaps 2;
:
: Oy 8 GSSLIISFVLGCAQNFROEYGATGAVGVAGVAGQLFGKSGRYAMAGVAVGLGLG 67
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Db 54 GASFGSRSLYINIGAKRVLNGLGSSCRSGFGRASNGFGVSG---FGYGGVGGGFG 110
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Oy 68 SK-----IGQMDQDQDKRLKNSLEKRYAGVTRRRNDTGNSSVVEPVRY 114
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Db 111 PSEPVCPGCGIEVTVNOSLTPHLQIDPTIQRVAEEREQIKTLNKFSEIDKVRFL 170
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Oy 115 QRYNK 119
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Db 171 EQQNK 175
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:
: RESULT 11
: US-08-374-077C-2
: Sequence 2, Application US/08374077C
: Patent No. 6027912
: GENERAL INFORMATION:
: APPLICANT: Hall, Linda M.
: APPLICANT: Ren, Dejian
: APPLICANT: Zheng, Wei
: APPLICANT: Dubald, Manuel Marcel Paul
: TITLE OF INVENTION: Genes Encoding an Invertebrate Alpha
: TITLE OF INVENTION: Calcium Channel Subunit
: NUMBER OF SEQUENCES: 57
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS, LLP
: STREET: 699 Prince Street
: CITY: Alexandria
: STATE: VA
: COUNTRY: USA
: ZIP: 22314-3187
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible

```

```

: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: Patent Release #1.0, Version #1.30
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/374,077C
: FILING DATE: 19-JAN-1995
: CLASSIFICATION: 435
: ATTORNEY/AGENT INFORMATION:
: NAME: McGowan, Malcolm M.
: REGISTRATION NUMBER: 39,300
: REFERENCE/DOCKET NUMBER: 022650-264
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: 703-836-6620
: TELEFAX: 703-836-2021
: INFORMATION FOR SEQ ID NO: 2:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 2516 amino acids
: TYPE: amino acid
: TOPOLOGY: linear
: MOLECULE TYPE: protein
:
: US-08-374-077C-2
:
: Query Match          9.2%; Score 76.5; DB 3; Length 2516;
: Best Local Similarity 24.8%; Pred. No. 20;
: Matches 32; Conservative 18; Mismatches 66; Indels 13; Gaps 4;
:
: Oy 30 VCAATGAVGVAGVAGQLFGKSGRYAMAGG--AVLGGLSGKIGOS---MQQDKIKIN 83
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Db 2389 IGSSNGSIFGSGAGLGGAGSGVCG-GLGSSSIRNAGFGSGSPSLSPHOPIYSGTIN 2447
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Oy 84 -----QSLKRYKAGGVTRRRNDTGNSSVVEPVRYQRYNKOERRQOYCREFQAKAMIA 137
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Db 2448 SPPIPDNRLRRVATVYTTNNKNKSOVSQNNSSSLNVRANANSQNMNSPTGPVQOOSPLR 2507
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Oy 138 GQKQEIYGT 146
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
: Db 2508 GQCNQYSS 2516
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:   | | | | | | | | | | | | | | | | | | | | | | | | | | | |
:
: RESULT 12
: US-08-895-590-2
: Sequence 2, Application US/08895590
: Patent No. 6207410
: GENERAL INFORMATION:
: APPLICANT: Hall, Linda M.
: APPLICANT: Ren, Dejian
: APPLICANT: Zheng, Wei
: APPLICANT: Dubald, Manuel Marcel Paul
: TITLE OF INVENTION: Genes Encoding an Insect Calcium Channel
: NUMBER OF SEQUENCES: 101
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS, LLP
: STREET: 699 Prince Street
: CITY: Alexandria
: STATE: VA
: COUNTRY: USA
: ZIP: 22314-3187
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: Patent Release #1.0, Version #1.30
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/895,590
: FILING DATE:
: CLASSIFICATION:
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US/08/374,888
: FILING DATE: 19-JAN-1995
: ATTORNEY/AGENT INFORMATION:
: NAME: McGowan, Malcolm M.
: REGISTRATION NUMBER: 39,300
: REFERENCE/DOCKET NUMBER: 022650-263
: TELECOMMUNICATION INFORMATION:

```

```

; TELEPHONE: 703-836-6620
; TELEFAX: 703-836-2021
; INFORMATION FOR SEQ ID NO: 2:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 2516 amino acids
;     TYPE: amino acid
;     TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-895-590-2

Query Match
Best Local Similarity 24.8%; Score 76.5; DB 4; Length 2516;
Pred. No. 20;
Matches 32; Conservative 18; Mismatches 66; Indels 13; Gaps 4;

QY 30 VGATGAVGVAGQLFGKSGRYAMAIG--AVLGGLIGSKIGS---MDQODKIKLN 83
Db 2389 IGSSNGSIFGSGAGLGGAGSGVG-GLGSSSIRNAFGSGSGPSSLSPQHQPYSGLTN 2447
QY 84 -----QSLERKAGQVTRMRNPDTGNSYSEVPRTYQRYNKQERRQOYCREFQOKAMIA 137
Db 2448 SPPIDNRLRRVATVTTNNNNKSOVSQNNSSSLNVRANANQNMSPPTQPVQOQSPLR 2507
QY 138 GQKQEIYGT 146
Db 2508 GQGNQTYSS 2516

RESULT 13
US-09-539-879A-2
; Sequence 2, Application US/09539879A
; Patent No. 6436627
; GENERAL INFORMATION:
;   APPLICANT: Hall, Linda M.
;     Ren, Dejian
;     Zheng, Wei
;     Dubald, Manuel Marcel Paul
;     TITLE OF INVENTION: Genes Encoding an Invertebrate Alpha
;       Calcium Channel Subunit
;     NUMBER OF SEQUENCES: 57
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE: BURNS, DOANE, SWECKER & MATHEIS, LLP
;       STREET: 699 Prince Street
;       CITY: Alexandria
;       STATE: VA
;       COUNTRY: USA
;       ZIP: 22314-3187
; COMPUTER READABLE FORM:
;   MEDIUM TYPE: Floppy disk
;   COMPUTER: IBM PC compatible
;   OPERATING SYSTEM: PC-DOS/MS-DOS
;   SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
;   APPLICATION NUMBER: US/09/539,879A
;   FILING DATE: 31-Mar-2000
;   CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: US/09/111,865
;   FILING DATE: <Unknown>
;   APPLICATION NUMBER: US 08/374,077
;   FILING DATE: 19-JAN-1995
; ATTORNEY/AGENT INFORMATION:
;   NAME: McGowan, Malcolm M.
;   REGISTRATION NUMBER: 39,300
;   REFERENCE/DOCKET NUMBER: 022650-264
; TELECOMMUNICATION INFORMATION:
;   TELEPHONE: 703-836-6620
;   TELEFAX: 703-836-2021
; INFORMATION FOR SEQ ID NO: 2:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 2516 amino acids
;     TYPE: amino acid
;     TOPOLOGY: linear
; MOLECULE TYPE: protein
```

```

; SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-539-879A-2

Query Match
Best Local Similarity 24.8%; Score 76.5; DB 4; Length 2516;
Pred. No. 20;
Matches 32; Conservative 18; Mismatches 66; Indels 13; Gaps 4;

QY 30 VGATGAVGVAGQLFGKSGRYAMAIG--AVLGGLIGSKIGS---MDQODKIKLN 83
Db 2389 IGSSNGSIFGSGAGLGGAGSGVG-GLGSSSIRNAFGSGSGPSSLSPQHQPYSGLTN 2447
QY 84 -----QSLERKAGQVTRMRNPDTGNSYSEVPRTYQRYNKQERRQOYCREFQOKAMIA 137
Db 2448 SPPIDNRLRRVATVTTNNNNKSOVSQNNSSSLNVRANANQNMSPPTQPVQOQSPLR 2507
QY 138 GQKQEIYGT 146
Db 2508 GQGNQTYSS 2516

RESULT 14
US-07-910-760-12
; Sequence 12, Application US/07910760
; Patent No. 5683864
; GENERAL INFORMATION:
;   APPLICANT: Houghton, Michael
;     APPLICANT: Choo, Qui-Lim
;     TITLE OF INVENTION: Combinations of Hepatitis C virus (HCV)
;       TITLE OF INVENTION: Antigen for use in Immunoassays for Anti-HCV Antibodies
;     NUMBER OF SEQUENCES: 12
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE: Chiron Corporation
;       STREET: P.O. Box 8097 (Int. Prop. R-440)
;       CITY: Emeryville
;       STATE: CA
;       COUNTRY: U.S.A.
;       ZIP: 94662-8097
; COMPUTER READABLE FORM:
;   MEDIUM TYPE: Floppy disk
;   COMPUTER: IBM PC compatible
;   OPERATING SYSTEM: PC-DOS/MS-DOS
;   SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
;   APPLICATION NUMBER: US/07/910,760
;   FILING DATE: 07-JUL-1992
;   CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
;   NAME: Blackburn Esq., Robert P.
;   REGISTRATION NUMBER: 30,447
;   REFERENCE/DOCKET NUMBER: 0101,002
; TELECOMMUNICATION INFORMATION:
;   TELEPHONE: (510) 601-2702
;   TELEFAX: (510) 655-3542
; INFORMATION FOR SEQ ID NO: 12:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 1021 amino acids
;     TYPE: amino acid
;     TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-910-760-12

Query Match
Best Local Similarity 9.1%; Score 76; DB 1; Length 1021;
Pred. No. 6;
Matches 42; Conservative 24; Mismatches 63; Indels 72; Gaps 9;

QY 31 GAATGAVGVAGQLFGK--SGRYAMAIG--GGAVYGLIGSKI--GQSMDOQDKIKLN 83
Db 792 GAATAFYAGAGLAGALGSLGKLVLDILAGYAGAGALVARKINSGEVPTIEDLVNLL 851
QY 84 QSL-----EKYKAGQ-VTRMRN-----PDTGNSYSEVPRTYQRYNKQ 120
Db 852 PATLSPGALVGVCAAILRRHVHVGEGAVQVMNNRLIAFASRCGNHVSFGNSSTNPRQK 911
```

OY 121 ERRQ-----QYCREFOQKAMIAQOKOIEYGTAC 148
DB 912 NKRNTNRRPDVKEFGCGGIVGCVYLLPRRGPRLGVRATRTKTSERSQPRGRQPI--PKA 969
OY 149 ROPDGR-----MOVISTE 161
DB 970 RREGRTMAQPGYPMPLYGNE 990

RESULT 15

US-08-440-519-12
; Sequence 12, Application US/08440519
; Patent No. 5712087
; GENERAL INFORMATION:
; APPLICANT: Houghton, Michael
; APPLICANT: Cho, Qui-Lim
; APPLICANT: Kuo, George
; TITLE OF INVENTION: Combinations of Hepatitis C virus (HCV)
; TITLE OF INVENTION: Antigens for use in Immunoassays for Anti-HCV Antibodies
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Chiron Corporation
; STREET: P.O. Box 8097 (Int. Prop. R-440)
; CITY: Emeryville
; STATE: CA
; COUNTRY: U.S.A.
; ZIP: 94662-8097
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/440,519
; FILING DATE: 12-MAY-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/910,760
; FILING DATE: 07-JUL-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Blackburn Esq., Robert P.
; REGISTRATION NUMBER: 30,447
; REFERENCE/DOCKET NUMBER: 0101.002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (510) 601-2702
; TELEFAX: (510) 655-3542
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1021 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-440-519-12

Query Match 9.1%; Score 76; DB 1; Length 1021;

Best Local Similarity 20.9%; Pred. No. 6.8;

Matches 42; Conservative 24; Mismatches 63; Indels 72; Gaps 9;

OY 31 GATGAVGVGVAGQLFGK-GSGRVAMAI-----GGAVLGGLIGSKI--GOSMDQDQKIKLN 83
DB 792 GATATVAGAGLAGAAGISGLGKVLIDILAGYGAGVAGALVAFKINSGEVSTEDLVNLL 851
OY 84 QSL-----EKYKNGO-VTRMKN-----PDGTGNSYSVEPVRTYQRYNKO 120
DB 852 PALSLGALVGVCAILIRRHVGPBGAVOMNRLIAFASRGNNHVSFGNSSTNPKPKQK 911
OY 121 ERRQ-----QYCREFOQKAMIAQOKOIEYGTAC 148
DB 912 NKRNTNRRPDVKEFGCGGIVGCVYLLPRRGPRLGVRATRTKTSERSQPRGRQPI--PKA 969
OY 149 ROPDGR-----MOVISTE 161

DB 970 RREGRTMAQPGYPMPLYGNE 990

Search completed: February 12, 2003, 16:46:34
Job time : 32 secs

THIS PAGE BLANK (USPTO)


```
; Patent No. US20020102679A1
; GENERAL INFORMATION:
; APPLICANT: Xu, Jiangchun
; APPLICANT: Mitcham, Jennifer L.
; APPLICANT: Harlocker, Susan L.
; APPLICANT: Dillon, Davin C.
; APPLICANT: Secrist, Heather
; APPLICANT: Lodes, Michael J.
; APPLICANT: Algate, Paul A.
; APPLICANT: Fling, Steve P.
; APPLICANT: Mannion, Jane
; APPLICANT: Benson, Darin R.
; APPLICANT: Carter, Darick
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
; FILE REFERENCE: 210121.523
; CURRENT APPLICATION NUMBER: US/09/864,864
; NUMBER OF SEQ ID NOS: 341
; SOFTWARE: Corixa Invention Disclosure Database
; SEQ ID NO 341
; LENGTH: 302
; TYPE: PRN
; ORGANISM: Homo sapiens
; US-09-864-864-341
```

```
Query Match          9.6%; Score 80.5; DB 10; Length 302;
Best Local Similarity 41.8%; Pred. No. 0.9;
Matches 23; Conservative 5; Mismatches 26; Indels 1; Gaps 1;
```

```
OY 31 GAATGATVGVGAVGOLFPGKSGRVAMATGAVLGLISGKIGSQMDQDKIKLNS 85
Db 236 GALLIGMGWGPGLGLAGFKVAGIAAALGGVL-GFTGGKTLQRKKQKMENTLTS 289
```

```
RESULT 3
US-09-981-353-19
; Sequence 19, Application US/09981353
; Patent No. US20020160382A1
; GENERAL INFORMATION:
; APPLICANT: Lassek, Amy W.
; APPLICANT: Jones, David A.
; TITLE OF INVENTION: GENES EXPRESSED IN COLON CANCER
; FILE REFERENCE: PA-0038 US
; CURRENT APPLICATION NUMBER: US/09/981,353
; NUMBER OF SEQ ID NOS: 194
; SOFTWARE: PERL Program
; SEQ ID NO 19
; LENGTH: 553
; TYPE: PRN
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc:feature
; OTHER INFORMATION: Incyte ID No. US20020160382A1 3040213CD1
US-09-981-353-19
```

```
Query Match          9.5%; Score 79.5; DB 9; Length 553;
Best Local Similarity 25.3%; Pred. No. 2.4;
```

```
Matches 41; Conservative 20; Mismatches 54; Indels 47; Gaps 8;
```

```
OY 6 LQSSLIITVFLVGAONFSRQEVGA-----TGAVVGVAGOLFPGK 49
Db 90 VQAEVAVFSSGLKGLSLNLEPDNVGVVFGNDKLIKEDIVKRGAIYDVPVGE---EL 146
OY 50 SGAVVAMATGAVG-GLIGK-----IGSQMDQDKIKLNSLEVKVKG 93
Db 147 LGRVVALNALIDGKGPISKTRBRVGLKAPGIIIRISVREPMOTGICAVDSLVPVGRSQ 206
OY 94 VTRFMR-----NPDTC-NSTSVSEPVRTYQRN--KQRRQOYC 127
Db 207 ----RLLIIGDROTGTSTAIDTIIINOKRFNDSDEKKKLYC 244
```

```
RESULT 4
US-09-925-300-1381
; Sequence 1381, Application US/09925300
; Patent No. US20020151681A1
; GENERAL INFORMATION:
; APPLICANT: Craig Rosen,
; APPLICANT: Steve Ruben
; TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
; FILE REFERENCE: PA101
; CURRENT APPLICATION NUMBER: US/09/925,300
; CURRENT FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: PCT/US00/05988
; PRIOR FILING DATE: 2000-03-08
; PRIOR APPLICATION NUMBER: 60/124,270
; PRIOR FILING DATE: 1999-03-12
; NUMBER OF SEQ ID NOS: 1890
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1381
; LENGTH: 618
; TYPE: PRN
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: SITE
; LOCATION: (507)
; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
; NAME/KEY: SITE
; LOCATION: (524)
; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
; NAME/KEY: SITE
; LOCATION: (562)
; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
US-09-925-300-1381
```

```
Query Match          9.4%; Score 79; DB 10; Length 618;
Best Local Similarity 28.0%; Pred. No. 3.2;
Matches 33; Conservative 13; Mismatches 46; Indels 26; Gaps 7;
```

```
OY 24 NFSROEVGATGAVVG--VAGOLFPGKSG--GRVAMATGAVLGLISGKIGSQMDQ 77
Db 99 SYGSSSFGSGSYGSGFSGSGFSGSGFSGSGFSGSGFSGSGFSGSGFSGSGFSG 156
OY 78 DKT-----KINQSLSEVKA-----GOVTRMRNPDGTGNSVSEPVRTYQRN 119
Db 157 EKVYTMQNLNRLASTLYLDRVRLAESNYLEKGIKEWYKHK-GNSHQGP-RDYSKYYK 212
```

```
RESULT 5
US-09-815-242-12113
; Sequence 12113, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
```

```

: PRIOR APPLICATION NUMBER: 60/253,625
: PRIOR FILING DATE: 2000-11-27
: PRIOR APPLICATION NUMBER: 60/257,931
: PRIOR FILING DATE: 2000-12-22
: PRIOR APPLICATION NUMBER: 60/269,308
: PRIOR FILING DATE: 2001-02-16
: NUMBER OF SEQ ID NOS: 14110
: SOFTWARE: fastseq for Windows Version 4.0
: SEQ ID NO 12113
: LENGTH: 514
: TYPE: prt
: ORGANISM: Pseudomonas aeruginosa
US-09-815-242-12113

```

Query Match	9.28;	Score 76.5;	DB 10;	Length 514;
Best Local Similarity	27.8%;	Pred. No. 4.5;		
Matches 37;	Conservative 18;	Mismatches 47;	Indels 31;	Gaps 7;

```

QY 20 GCAGNFSENOEGAAATGAVVCGAQAOLKSGKSGRVAAMIGAVLGGLLGKSGIGSDMDOK 79
    | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 62 GMAIANTLEDQDSVGAIVLEBYCGIACGMNAKCTGRILEYVPVGPBELLGRVADLGNPIDCKP 121
    | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 80 I - - KLNQSLSEVKVAGQYTRMRNPPTGNSYSV - EPRVT - YORYNQNEKRQYCRFEOQAM 135
    | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 122 IDAATATDAVENVAACGVI - WRK - - - - - SYDQFVQYGTGRSD - - - - - -AM 157
    | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 136 I - - - AGQAKQELIYG 145
    | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 158 IPVGRGQORELITG 170
    | : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

```

```

US RESULT 6
US-09-738-626-5811
Sequence 5811, Application US/09738626
Publication No. US20020197605A1
GENERAL INFORMATION:
APPLICANT: NAKAGAWA, SATOSHI
APPLICANT: MIZOGUCHI, HIROSHI
APPLICANT: ANDO, SEIKO
APPLICANT: HAYASHI, MIKIRO
APPLICANT: OCHIAI, KEIKO
APPLICANT: YOKOJI, HARUHIRO
APPLICANT: TATEISHI, NAOKO
APPLICANT: SENOHI, AKIHIRO
APPLICANT: IKEDA, MASATO
APPLICANT: OZAKI, AKIO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738, 626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: JP 99/37484
PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR FILING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PatentIn ver. 3.0
SEQ ID NO 5811
LENGTH: 346
TYPE: PRT
ORGANISM: Corynebacterium glutamicum
US-09-738-626-5811

```

Query Match	9.1%;	Score 76;	DB 9;	Length 346;
Best Local Similarity	28.8%;	Pred. No. 3.1;		
Matches 21; Conservative	8;	Mismatches 36;	Indels 8;	Gaps 1

```

0Y      4 GCLDGGSLIIITSVFLVCAQNFESRQDEVGATGAIVGVAGOL-----FGKSGRYAM 55
          |   ||| : : : |   ||| :   ||||| :   ||| :
Db     98 GVSAGSGIGAVTVVGCTVLGFSPSIGVIGALAEVGGVAVALTLIMYSRGVGGSSITTV 157
0Y      56 AICGAVLGLGLGS` 68

```

Db 158 ILAGVAVAAFASS 170

```

RESULT 7
US-09-815-242-12104
Sequence 12104, Application US/09815242
Patent No. US20020061569A1
GENERAL INFORMATION:
APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Karl L.
APPLICANT: Zyskind, Judith W.
APPLICANT: Wall, Daniel
APPLICANT: Tawlick, John D.
APPLICANT: Carr, Grant J.
APPLICANT: Yamamoto, Robert T.
APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of Essential Genes in
TITLE OF INVENTION: Prokaryotes
FILE REFERENCE: ELITRA.011A
CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: 60/242,578
PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/253,635
PRIOR FILING DATE: 2000-11-27
PRIOR APPLICATION NUMBER: 60/257,931
PRIOR FILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: 60/269,308
PRIOR FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 14110
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 12104
LENGTH: 342
TYPE: PRT
ORGANISM: Pseudomonas aeruginosa
US-09-815-242-12104

```

Query Match	9.0%;	Score 75;	DB 10;	Length 342;
Best Local Similarity	24.0%;	Pred. No. 3.8;		
Matches	25;	Conservative 18;	Mismatches 25;	Indels 36;
			Gaps	4

[illegible]

RESULT 8
US-09-978-295A-28
Sequence 28, Application US/09978295A
Patent No. US2002015606A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerltsen, Mary E.

APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavlin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James;
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Thomas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630P1c11
CURRENT APPLICATION NUMBER: US/09/978,295A
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/074450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 60/078004
PRIOR FILING DATE: 1998-03-13
PRIOR APPLICATION NUMBER: 60/078886
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078936
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078939
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079664
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079663
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079786
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079920
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/079923
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/080105
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080107
PRIOR FILING DATE: 1998-03-31

PRIOR APPLICATION NUMBER: 60/080165
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080194
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080327
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080328
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080333
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080334
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/081070
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081049
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081071
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081195
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081203
PRIOR FILING DATE: 1998-04-09
PRIOR APPLICATION NUMBER: 60/081229
PRIOR FILING DATE: 1998-04-09
PRIOR APPLICATION NUMBER: 60/081955
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081817
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081819
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081952
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081838
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/082568
PRIOR FILING DATE: 1998-04-21
PRIOR APPLICATION NUMBER: 60/082569
PRIOR FILING DATE: 1998-04-21
PRIOR APPLICATION NUMBER: 60/082704
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082804
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082700
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082797
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082796
PRIOR FILING DATE: 1998-04-23
PRIOR APPLICATION NUMBER: 60/083336
PRIOR FILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/083322
PRIOR FILING DATE: 1998-04-28
PRIOR APPLICATION NUMBER: 60/083392
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083495
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083496
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083499
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083545
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083554
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083558
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083559
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083500
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083742
PRIOR FILING DATE: 1998-04-30
PRIOR APPLICATION NUMBER: 60/084366

```

; PRIOR FILING DATE: 1998-05-05
; PRIOR APPLICATION NUMBER: 60/084414
; PRIOR FILING DATE: 1998-05-06
; PRIOR APPLICATION NUMBER: 60/084441
; PRIOR FILING DATE: 1998-05-06
; PRIOR APPLICATION NUMBER: 60/084637
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084639
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084640
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084598
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084600
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084627
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084643
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/085339
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085338
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085323
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085582
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085700
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085689
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085579
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085580
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085573
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085704
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085697
;
Query Match      8.9%; Score 74.5; DB 9; Length 285;
Best Local Similarity 20.8%; Pred. No. 3.4;
Matches 26; Conservative 27; Mismatches 49; Indels 23; Gaps 4;
OY 12 IISVF-LVGCANFSGHGEVATGAVGVAQLFGKSGRAAIGAVLGIGSKI 70
Db 144 VETITFVTNLSINYRNKDALSHFYAGAVTSLF---RINVLGRGLVAGGIIGALL 198
OY 71 GQSMDE-----QODKIKINQSLKRYKAGVTRMRNPDGNSYSVEPRTYOR 116
Db 199 GTFVGGILMAFOKYAGETVGERKKORRALHELK---LEEMKGRLOVTEHLPRKIESSLR 255
OY 117 YNKOE 121
Db 256 EDEPE 260
;
RESULT 9
US-09-978-697-28
; Sequence 28, Application US/09978697
; Patent No. US20020169284A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi.
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnovers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Flvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
```

```

; APPLICANT: Gerltsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James.
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630PIC27
; CURRENT APPLICATION NUMBER: US/09/978,697
; CURRENT FILING DATE: 2001-10-16
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
; PRIOR FILING DATE: 1997-11-03
; PRIOR APPLICATION NUMBER: 60/065311
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: 60/066364
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: 60/077450
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: 60/077632
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077641
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077649
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077791
; PRIOR FILING DATE: 1998-03-12
; PRIOR APPLICATION NUMBER: 60/078004
; PRIOR FILING DATE: 1998-03-13
; PRIOR APPLICATION NUMBER: 60/078886
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078936
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078910
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078939
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/079294
; PRIOR FILING DATE: 1998-03-25
; PRIOR APPLICATION NUMBER: 60/079656
; PRIOR FILING DATE: 1998-03-26
; PRIOR APPLICATION NUMBER: 60/079664
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079689
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079663
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079786
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079920
; PRIOR FILING DATE: 1998-03-30
; PRIOR APPLICATION NUMBER: 60/079923
; PRIOR FILING DATE: 1998-03-30
; PRIOR APPLICATION NUMBER: 60/080105
; PRIOR FILING DATE: 1998-03-31
; PRIOR APPLICATION NUMBER: 60/080107
```

```

1 PRIOR APPLICATION NUMBER: 60/084366
2
3 PRIOR FILING DATE: 1998-05-05
4
5 PRIOR APPLICATION NUMBER: 60/084414
6
7 PRIOR FILING DATE: 1998-05-06
8
9 PRIOR APPLICATION NUMBER: 60/084441
10
11 PRIOR FILING DATE: 1998-05-06
12
13 PRIOR APPLICATION NUMBER: 60/084637
14
15 PRIOR FILING DATE: 1998-05-07
16
17 PRIOR APPLICATION NUMBER: 60/084639
18
19 PRIOR FILING DATE: 1998-05-07
20
21 PRIOR APPLICATION NUMBER: 60/084640
22
23 PRIOR FILING DATE: 1998-05-07
24
25 PRIOR APPLICATION NUMBER: 60/084598
26
27 PRIOR FILING DATE: 1998-05-07
28
29 PRIOR APPLICATION NUMBER: 60/084600
30
31 PRIOR FILING DATE: 1998-5-07
32
33 PRIOR APPLICATION NUMBER: 60/084627
34
35 PRIOR FILING DATE: 1998-05-07
36
37 PRIOR APPLICATION NUMBER: 60/084643
38
39 PRIOR FILING DATE: 1998-05-07
40
41 PRIOR APPLICATION NUMBER: 60/085339
42
43 PRIOR FILING DATE: 1998-05-13
44
45 PRIOR APPLICATION NUMBER: 60/085338
46
47 PRIOR FILING DATE: 1998-05-13
48
49 PRIOR APPLICATION NUMBER: 60/085323
50
51 PRIOR FILING DATE: 1998-05-13
52
53 PRIOR APPLICATION NUMBER: 60/085582
54
55 PRIOR FILING DATE: 1998-05-15
56
57 PRIOR APPLICATION NUMBER: 60/085700
58
59 PRIOR FILING DATE: 1998-05-15
60
61 PRIOR APPLICATION NUMBER: 60/085669
62
63 PRIOR FILING DATE: 1998-05-15
64
65 PRIOR APPLICATION NUMBER: 60/085579
66
67 PRIOR FILING DATE: 1998-05-15
68
69 PRIOR APPLICATION NUMBER: 60/085580
70
71 PRIOR FILING DATE: 1998-05-15
72
73 PRIOR APPLICATION NUMBER: 60/085573
74
75 PRIOR FILING DATE: 1998-05-15
76
77 PRIOR APPLICATION NUMBER: 60/085704
78
79 PRIOR FILING DATE: 1998-05-15
80
81 PRIOR APPLICATION NUMBER: 60/085697
82

```

[illegible]

APPLICANT: Gerber, Hanspeter
APPLICANT: Gerltsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavlin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James;
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC9
CURRENT APPLICATION NUMBER: US/09/976,192A
CURRENT FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 60/078004
PRIOR FILING DATE: 1998-03-13
PRIOR APPLICATION NUMBER: 60/078886
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078936
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078939
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079664
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079663
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079786
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079920
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/079923
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/080105
PRIOR FILING DATE: 1998-03-31

PRIOR APPLICATION NUMBER: 60/080107
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080165
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080194
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080327
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080328
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080333
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080334
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/081070
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081049
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081071
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081195
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081203
PRIOR FILING DATE: 1998-04-09
PRIOR APPLICATION NUMBER: 60/081229
PRIOR FILING DATE: 1998-04-09
PRIOR APPLICATION NUMBER: 60/081955
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081817
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081819
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081952
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081838
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/082568
PRIOR FILING DATE: 1998-04-21
PRIOR APPLICATION NUMBER: 60/082569
PRIOR FILING DATE: 1998-04-21
PRIOR APPLICATION NUMBER: 60/082704
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082804
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082700
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082797
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082796
PRIOR FILING DATE: 1998-04-23
PRIOR APPLICATION NUMBER: 60/083336
PRIOR FILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/083322
PRIOR FILING DATE: 1998-04-28
PRIOR APPLICATION NUMBER: 60/083392
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083495
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083496
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083499
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083545
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083554
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083558
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083559
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083500
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083742

```

; PRIOR FILING DATE: 1998-04-30
; PRIOR APPLICATION NUMBER: 60/084366
; PRIOR FILING DATE: 1998-05-05
; PRIOR APPLICATION NUMBER: 60/084414
; PRIOR FILING DATE: 1998-05-06
; PRIOR APPLICATION NUMBER: 60/084441
; PRIOR FILING DATE: 1998-05-06
; PRIOR APPLICATION NUMBER: 60/084637
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084639
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084640
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084598
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084600
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084627
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084643
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/085339
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085338
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085323
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085582
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085700
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085689
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085579
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085580
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085573
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085704
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085697

Query Match      8.9%: Score 74.5; DB 9; Length 285;
Best Local Similarity 20.8%: Pred. No. 3.4;
Matches 26; Conservative 27; Mismatches 49; Indels 23; Gaps 4;

QY      12  IISVF-LVGCANFSGROEVGATGAVGVAGQLFGKSGRYAMATGAVIGLIGSKI 70
      :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :
Db      144  VFTITFTVTSLNRYRNKDALSHFYIAGAVTGSLSF-----RINVGRLVAGGIIGALL 198

QY      71  GQSM-----QQDKIKLNSLEKVKAGQVTRKRPDNGNSISVEPVRYOR 116
      :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :
Db      199  GFPEVGLMAFORVAGETVERKQDKRKALHFLK---LEEMKGRLOVTEHLPRKISSLR 255

QY      117  YNKOE 121
      :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :  :
Db      256  EDEPE 260

RESULT 11
US-09-999-832A-28
; Sequence 28, Application US/09999832A
; Publication No. US20020192706A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
```

```

; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gertlisen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Guiney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kljavin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James;
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630PIC63
; CURRENT APPLICATION NUMBER: US/09/999,832A
; PRIOR FILING DATE: 2001-10-24
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
; PRIOR FILING DATE: 1997-11-03
; PRIOR APPLICATION NUMBER: 60/065311
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: 60/066364
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: 60/077450
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: 60/077632
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077641
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077649
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077791
; PRIOR FILING DATE: 1998-03-12
; PRIOR APPLICATION NUMBER: 60/078004
; PRIOR FILING DATE: 1998-03-13
; PRIOR APPLICATION NUMBER: 60/078886
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078936
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078910
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078939
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/079294
; PRIOR FILING DATE: 1998-03-25
; PRIOR APPLICATION NUMBER: 60/079656
; PRIOR FILING DATE: 1998-03-26
; PRIOR APPLICATION NUMBER: 60/079664
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079689
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079663
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079786
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079920
; PRIOR FILING DATE: 1998-03-30
; PRIOR APPLICATION NUMBER: 60/079923
; PRIOR FILING DATE: 1998-03-30
; PRIOR APPLICATION NUMBER: 60/080105
```



```
;; PRIOR FILING DATE: 1998-03-31
;; PRIOR APPLICATION NUMBER: 60/080107
;; PRIOR FILING DATE: 1998-03-31
;; PRIOR APPLICATION NUMBER: 60/080165
;; PRIOR FILING DATE: 1998-03-31
;; PRIOR APPLICATION NUMBER: 60/080194
;; PRIOR FILING DATE: 1998-03-31
;; PRIOR APPLICATION NUMBER: 60/080327
;; PRIOR FILING DATE: 1998-04-01
;; PRIOR APPLICATION NUMBER: 60/080328
;; PRIOR FILING DATE: 1998-04-01
;; PRIOR APPLICATION NUMBER: 60/080333
;; PRIOR FILING DATE: 1998-04-01
;; PRIOR APPLICATION NUMBER: 60/080334
;; PRIOR FILING DATE: 1998-04-01
;; PRIOR APPLICATION NUMBER: 60/081070
;; PRIOR FILING DATE: 1998-04-08
;; PRIOR APPLICATION NUMBER: 60/081049
;; PRIOR FILING DATE: 1998-04-08
;; PRIOR APPLICATION NUMBER: 60/081071
;; PRIOR FILING DATE: 1998-04-08
;; PRIOR APPLICATION NUMBER: 60/081195
;; PRIOR FILING DATE: 1998-04-08
;; PRIOR APPLICATION NUMBER: 60/081203
;; PRIOR FILING DATE: 1998-04-09
;; PRIOR APPLICATION NUMBER: 60/081229
;; PRIOR FILING DATE: 1998-04-09
;; PRIOR APPLICATION NUMBER: 60/081955
;; PRIOR FILING DATE: 1998-04-15
;; PRIOR APPLICATION NUMBER: 60/081817
;; PRIOR FILING DATE: 1998-04-15
;; PRIOR APPLICATION NUMBER: 60/081819
;; PRIOR FILING DATE: 1998-04-15
;; PRIOR APPLICATION NUMBER: 60/081952
;; PRIOR FILING DATE: 1998-04-15
;; PRIOR APPLICATION NUMBER: 60/081838
;; PRIOR FILING DATE: 1998-04-15
;; PRIOR APPLICATION NUMBER: 60/082568
;; PRIOR FILING DATE: 1998-04-21
;; PRIOR APPLICATION NUMBER: 60/082569
;; PRIOR FILING DATE: 1998-04-21
;; PRIOR APPLICATION NUMBER: 60/082704
;; PRIOR FILING DATE: 1998-04-22
;; PRIOR APPLICATION NUMBER: 60/082804
;; PRIOR FILING DATE: 1998-04-22
;; PRIOR APPLICATION NUMBER: 60/082700
;; PRIOR FILING DATE: 1998-04-22
;; PRIOR APPLICATION NUMBER: 60/082797
;; PRIOR FILING DATE: 1998-04-22
;; PRIOR APPLICATION NUMBER: 60/082796
;; PRIOR FILING DATE: 1998-04-23
;; PRIOR APPLICATION NUMBER: 60/083336
;; PRIOR FILING DATE: 1998-04-27
;; PRIOR APPLICATION NUMBER: 60/083322
;; PRIOR FILING DATE: 1998-04-28
;; PRIOR APPLICATION NUMBER: 60/083392
;; PRIOR FILING DATE: 1998-04-29
;; PRIOR APPLICATION NUMBER: 60/083495
;; PRIOR FILING DATE: 1998-04-29
;; PRIOR APPLICATION NUMBER: 60/083496
;; PRIOR FILING DATE: 1998-04-29
;; PRIOR APPLICATION NUMBER: 60/083499
;; PRIOR FILING DATE: 1998-04-29
;; PRIOR APPLICATION NUMBER: 60/083545
;; PRIOR FILING DATE: 1998-04-29
;; PRIOR APPLICATION NUMBER: 60/083554
;; PRIOR FILING DATE: 1998-04-29
;; PRIOR APPLICATION NUMBER: 60/083558
;; PRIOR FILING DATE: 1998-04-29
;; PRIOR APPLICATION NUMBER: 60/083559
;; PRIOR FILING DATE: 1998-04-29
;; PRIOR APPLICATION NUMBER: 60/083500
;; PRIOR FILING DATE: 1998-04-29
```

```
;; PRIOR APPLICATION NUMBER: 60/083742
;; PRIOR FILING DATE: 1998-04-30
;; PRIOR APPLICATION NUMBER: 60/084366
;; PRIOR FILING DATE: 1998-05-05
;; PRIOR APPLICATION NUMBER: 60/084414
;; PRIOR FILING DATE: 1998-05-06
;; PRIOR APPLICATION NUMBER: 60/084441
;; PRIOR FILING DATE: 1998-05-06
;; PRIOR APPLICATION NUMBER: 60/084637
;; PRIOR FILING DATE: 1998-05-07
;; PRIOR APPLICATION NUMBER: 60/084639
;; PRIOR FILING DATE: 1998-05-07
;; PRIOR APPLICATION NUMBER: 60/084640
;; PRIOR FILING DATE: 1998-05-07
;; PRIOR APPLICATION NUMBER: 60/084598
;; PRIOR FILING DATE: 1998-05-07
;; PRIOR APPLICATION NUMBER: 60/084600
;; PRIOR FILING DATE: 1998-05-07
;; PRIOR APPLICATION NUMBER: 60/084627
;; PRIOR FILING DATE: 1998-05-07
;; PRIOR APPLICATION NUMBER: 60/084643
;; PRIOR FILING DATE: 1998-05-07
;; PRIOR APPLICATION NUMBER: 60/085339
;; PRIOR FILING DATE: 1998-05-13
;; PRIOR APPLICATION NUMBER: 60/085338
;; PRIOR FILING DATE: 1998-05-13
;; PRIOR APPLICATION NUMBER: 60/085323
;; PRIOR FILING DATE: 1998-05-13
;; PRIOR APPLICATION NUMBER: 60/085582
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085700
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085689
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085579
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085580
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085573
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085704
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085697

Query Match      8.93; Score 74.5; DB 9; Length 285;
Best Local Similarity 20.88; Fred. No. 3.4;
Matches 26; Conservative 27; Mismatches 49; Indels 23; Gaps 4;

QY      12  IISVF-LVGCACNFSRQEVGAATGAVGVAGOLFPGSGRVAMATGAVLGIGLSKI 70
      ::::| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      144  VEVITFTVNTSLNVYRNKDKLSHFVYAGAVTGSLF-----RIVGRLGYAGGIIIGALL 198
      ::::| | | | | | | | | | | | | | | | | | | | | | | | | | | |
QY      71  GQSMDE-----QODKIKLNSLEKYKAGVTRMRNDTGSNSYSVEPRTYOR 116
      ::::| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      199  GTPVGGILMAFOKYAGTGVORERKOKDKRKALHEIK---LEEWKGRLOVTEHLPKIESSLR 255
      ::::| | | | | | | | | | | | | | | | | | | | | | | | | | | |
QY      117  YNKOE 121
      ::::|
Db      256  EDEPE 260

RESULT 12
US-09-978-189-28
; Sequence 28; Application US/09978189
; Publication No. US20030004102A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
```

APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavlin, Iva J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Paoli, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC
CURRENT APPLICATION NUMBER: US/09/978,189
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 60/078004
PRIOR FILING DATE: 1998-03-13
PRIOR APPLICATION NUMBER: 60/078886
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078936
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078939
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079664
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079663
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079786
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079920
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/079923
PRIOR FILING DATE: 1998-03-30

PRIOR APPLICATION NUMBER: 60/080105
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080107
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080165
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080194
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080327
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080328
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080333
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080334
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/081070
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081049
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081071
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081195
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081203
PRIOR FILING DATE: 1998-04-09
PRIOR APPLICATION NUMBER: 60/081229
PRIOR FILING DATE: 1998-04-09
PRIOR APPLICATION NUMBER: 60/081955
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081817
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081819
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081952
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081838
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/082568
PRIOR FILING DATE: 1998-04-21
PRIOR APPLICATION NUMBER: 60/082569
PRIOR FILING DATE: 1998-04-21
PRIOR APPLICATION NUMBER: 60/082704
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082804
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082700
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082797
PRIOR FILING DATE: 1998-04-22
PRIOR APPLICATION NUMBER: 60/082796
PRIOR FILING DATE: 1998-04-23
PRIOR APPLICATION NUMBER: 60/083336
PRIOR FILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/083322
PRIOR FILING DATE: 1998-04-28
PRIOR APPLICATION NUMBER: 60/083392
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083495
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083496
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083499
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083545
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083554
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083558
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083559
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083500

```

; PRIOR FILING DATE: 1998-04-29
; PRIOR APPLICATION NUMBER: 60/083742
; PRIOR FILING DATE: 1998-04-30
; PRIOR APPLICATION NUMBER: 60/084366
; PRIOR FILING DATE: 1998-05-05
; PRIOR APPLICATION NUMBER: 60/084414
; PRIOR FILING DATE: 1998-05-06
; PRIOR APPLICATION NUMBER: 60/084441
; PRIOR FILING DATE: 1998-05-06
; PRIOR APPLICATION NUMBER: 60/084637
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084639
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084640
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084598
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084600
; PRIOR FILING DATE: 1998-5-07
; PRIOR APPLICATION NUMBER: 60/084627
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084643
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/085339
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085338
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085323
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085582
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085700
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085689
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085579
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085580
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085573
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085704
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085697

```

Query Match 8.9%; Score 74.5; DB 9; Length 285;
Best Local Similarity 20.8%; Pred. No. 3.4;
Matches 26; Conservative 27; Mismatches 49; Indels 23; Gaps 4;

```

OY 12 IISVF-LVCAQNFSEVGAATGAVGAGOLFEGSGRVAMATGAVLGGLIGSKI 70
DB 144 VFVTIFNTVNTSLNVYRNKDALSHFYIAGAVTGSLF-----RINVGRLGVLVAGIIGALL 198
OY 71 GQSM-----OQDKIKLNSLEKYKAGVTRMRNDTGNSSVPEVRTYQR 116
DB 199 GTPVGGILMAFOKYAGETVGERKQKDKALHELK---LEEMKGRLOYTEHLPEKIESSLR 255
OY 117 YNRQE 121
DB 256 EDEPE 260

```

```

RESULT 13
US-10-174-590-4
; Sequence 4, Application US/10174590
; Publication No. US20030008352A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Chen, Jian
; APPLICANT: Desnoyers, Luc
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.

```

```

; APPLICANT: Pan, James
; APPLICANT: Smith, Victoria
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE REFERENCE: P3430R1C42
; CURRENT APPLICATION NUMBER: US/10/174,590
; CURRENT FILING DATE: 2002-06-18
; Prior application removed - See file wrapper or Palm
; NUMBER OF SEQ ID NOS: 612
; SEQ ID NO 4
; LENGTH: 285
; TYPE: PRT
; ORGANISM: Homo Saplen
US-10-174-590-4

```

Query Match 8.9%; Score 74.5; DB 9; Length 285;
Best Local Similarity 20.8%; Pred. No. 3.4;
Matches 26; Conservative 27; Mismatches 49; Indels 23; Gaps 4;

```

OY 12 IISVF-LVCAQNFSEVGAATGAVGAGOLFEGSGRVAMATGAVLGGLIGSKI 70
DB 144 VFVTIFNTVNTSLNVYRNKDALSHFYIAGAVTGSLF-----RINVGRLGVLVAGIIGALL 198
OY 71 GQSM-----OQDKIKLNSLEKYKAGVTRMRNDTGNSSVPEVRTYQR 116
DB 199 GTPVGGILMAFOKYAGETVGERKQKDKALHELK---LEEMKGRLOYTEHLPEKIESSLR 255
OY 117 YNRQE 121
DB 256 EDEPE 260

```

```

RESULT 14
US-10-176-758-4
; Sequence 4, Application US/10176758
; Publication No. US20030008353A1
; GENERAL INFORMATION:

```

```

; APPLICANT: Baker, Kevin P.
; APPLICANT: Chen, Jian
; APPLICANT: Desnoyers, Luc
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Pan, James
; APPLICANT: Smith, Victoria
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE REFERENCE: P3430R1C104
; CURRENT APPLICATION NUMBER: US/10/176,758
; CURRENT FILING DATE: 2002-06-21
; Prior application removed - See file wrapper or Palm
; NUMBER OF SEQ ID NOS: 612
; SEQ ID NO 4
; LENGTH: 285
; TYPE: PRT
; ORGANISM: Homo Saplen
US-10-176-758-4

```

Query Match 8.9%; Score 74.5; DB 9; Length 285;
Best Local Similarity 20.8%; Pred. No. 3.4;
Matches 26; Conservative 27; Mismatches 49; Indels 23; Gaps 4;

```

OY 12 IISVF-LVCAQNFSEVGAATGAVGAGOLFEGSGRVAMATGAVLGGLIGSKI 70
DB 144 VFVTIFNTVNTSLNVYRNKDALSHFYIAGAVTGSLF-----RINVGRLGVLVAGIIGALL 198
OY 71 GQSM-----OQDKIKLNSLEKYKAGVTRMRNDTGNSSVPEVRTYQR 116

```

```
Db 199 GTPVGGILMAFOXYAGETVQERKQDKRALHELR---LEEMKGRLOVTEHLPEKIESSLR 255
QY 117 YNKQE 121
Db 256 EDEPE 260
```

RESULT 15

```
US-10-175-737-4
; Sequence 4, Application US/10175737
; Publication No. US20030013153A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Chen, Jian
; APPLICANT: Desnoyers, Luc
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Pan, James
; APPLICANT: Smith, Victoria
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE OF INVENTION: ACIDS ENCODING THE SAME
; FILE REFERENCE: P3430R1C50
; CURRENT APPLICATION NUMBER: US/10/175,737
; CURRENT FILING DATE: 2002-06-19
; Prior Application removed - See File Wrapper or Palm
; NUMBER OF SEQ ID NOS: 612
; SEQ ID NO 4
; LENGTH: 285
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-175-737-4
```

Query Match 8.9%; Score 74.5; DB 9; Length 285;

Best Local Similarity 20.8%; Pred. No. 3.4; Mismatches 26; Conservative 27; Indels 23; Gaps 4;

```
QY 12 IISVF-LVGCAGNFSRQEVGATGAVGVAGQLFGGSGRYAMAIAGAVLGGLISKI 70
Db 144 VFTVITFTVNTSLNVYRNKDALSHFVIAGAVTSLF----RINVGRLGLVAGGIIGALL 198
QY 71 GQSMQ-----QQDKIKLNQSLKXKAGOVTRRNPDIGNSTYSVEPVFTYQR 116
Db 199 GTPVGGILMAFOXYAGETVQERKQDKRALHELR---LEEMKGRLOVTEHLPEKIESSLR 255
QY 117 YNKQE 121
Db 256 EDEPE 260
```

Search completed: February 12, 2003, 16:50:27
Job time : 13 secs

GenCore version 5.1.3
Copyright (c) 1993 - 2003 CompuGen Ltd.

OW protein - protein search, using sw model

Run on: February 12, 2003, 16:41:16 ; Search time 40 Seconds

(without alignments)
834,491 Million cell updates/sec

Title: US-09-677-374-2

Perfect score: 836
Sequence: 1 MNRCGLOGSLIIISVFLVG.....ITGACROPDGRMWISTEK 162

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 671580 seqs, 206047115 residues

Total number of hits satisfying chosen parameters: 671580

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :

SPTREMBL_21:*
1: sp_archaea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_protist:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_virus:*
16: sp_bacteriophage:*
17: sp_archaea:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	836	100.0	162	2	Q9F9K8
2	313.5	37.5	148	2	054381
3	291	34.8	159	2	Q9F9F2
4	266.5	31.9	137	2	052252
5	260.5	31.2	144	2	Q9K2N6
6	259.5	31.0	137	2	031065
7	259.5	31.0	144	2	Q9K4W8
8	252	29.5	151	2	Q53154
9	247	29.5	151	2	Q9F9Q9
10	237.5	28.4	131	2	Q9F001
11	237.5	28.4	131	2	052637
12	236.5	28.3	131	2	Q9L522
13	223.5	26.7	105	2	Q91522
14	143	17.1	199	16	Q985G4
15	140	16.7	77	2	Q9AGC7
16	131.5	15.7	135	2	Q8VUE8

17	130.5	15.6	136	16	Q92R89	Q92R89 rhizobium m
18	128.5	15.4	182	16	Q9HX13	Q9HX13 pseudomonas
19	125.5	15.0	131	16	Q8YGC27	Q8YGC27 brucella me
20	116	13.9	154	16	Q914S1	Q914S1 pseudomonas
21	112	13.4	165	17	Q8YPM1	Q8YPM1 methanocarc
22	112	13.4	257	16	Q9PGX0	Q9PGX0 xylella fas
23	111.5	13.3	142	16	Q8UGR3	Q8UGR3 agrobacteri
24	111	13.3	139	2	Q52854	Q52854 rhizobium l
25	110.5	13.2	232	16	Q9A3X8	Q9A3X8 caulobacter
26	108.5	13.0	155	2	Q9F6B1	Q9F6B1 edwardsiell
27	108.5	13.0	155	16	Q8Z616	Q8Z616 yersinia pe
28	107.5	12.9	102	16	Q8U5V9	Q8U5V9 agrobacteri
29	107.5	12.9	153	2	Q69776	Q69776 rhizobium e
30	107.5	12.9	155	2	Q9RA95	Q9RA95 serratia sp
31	106.5	12.7	221	16	Q92ST9	Q92ST9 rhizobium m
32	106	12.7	153	2	Q9RE08	Q9RE08 peccobacter
33	105.5	12.6	223	2	Q9XC44	Q9XC44 porphyromon
34	102.5	12.3	167	16	Q8Y0Z4	Q8Y0Z4 raietonia s
35	102	12.2	179	16	Q8XH13	Q8XH13 salmonella
36	102	12.2	232	16	Q8YH11	Q8YH11 brucella me
37	101.5	12.1	304	16	Q91762	Q91762 pseudomonas
38	100	12.0	222	16	Q8XSH0	Q8XSH0 raietonia s
39	99.5	11.9	83	16	Q92LP2	Q92LP2 rhizobium m
40	99.5	11.9	137	9	Q8SCK8	Q8SCK8 pseudomonas
41	99.5	11.9	155	16	Q8XVNB	Q8XVNB pseudomonas
42	99	11.8	154	16	Q9CN83	Q9CN83 pasteuria s
43	99	11.8	179	16	Q8X8G4	Q8X8G4 escherichia
44	98	11.7	179	16	Q8ZFR7	Q8ZFR7 yersinia pe
45	98	11.7	220	2	Q9XAX8	Q9XAX8 pseudomonas

ALIGNMENTS

RESULT 1
ID Q9F9K8 PRELIMINARY; PRT; 162 AA.
AC Q9F9K8:
DT 01-MAR-2001 (TREMREL. 16, Created)
DT 01-MAR-2001 (TREMREL. 16, Last sequence update)
DT 01-MAR-2001 (TREMREL. 16, Last annotation update)
DE 17 kDa antigen.
GN OSPA.
OS Piscirickettsia salmonis.
OC Bacteria; Proteobacteria; gamma subdivision; Piscirickettsia group;
OC Piscirickettsia.
OX NCBI_TaxID=1238;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=LF-89;
RA Kuzyn M.A., Burton J., Thornton J.C., Kay W.W.;
RT "Identification of a genus-common Rickettsial surface antigen in the
RT salmonid pathogen Piscirickettsia salmonis.";
RL Submitted (SEP-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF184152; AAC17000.1; -
SQ SEQUENCE 162 AA: 17661 MW: DDE99E6FD94A527E CRC64;

Query Match 100.0%; Score 836; DB 2; Length 162;
Best Local Similarity 100.0%; Pred. No. 3.7e-68;
Matches 162; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MNRCGLOGSLIIISVFLVGCAONFNSROEVGATGAVVGVAGOLFCKSGSRVMAATGCA 60
DB 1 MNRCGLOGSLIIISVFLVGCAONFNSROEVGATGAVVGVAGOLFCKSGSRVMAATGCA 60
QY 61 VLGLISKTIKIGOSMDODDKIKLNOSLEKVRKAGVTRRNRPDTGNSYVEPRTQRYNKQ 120
DB 61 VLGLISKTIKIGOSMDODDKIKLNOSLEKVRKAGVTRRNRPDTGNSYVEPRTQRYNKQ 120
QY 121 ERROGYCREFOOKAMIGOKOELIYGTACROPDGRMWISTEK 162
DB 121 ERROGYCREFOOKAMIGOKOELIYGTACROPDGRMWISTEK 162

```
RESULT 2
ID 054381 PRELIMINARY; PRT: 148 AA.
AC 054381;
DT 01-JUN-1998 (TREMBLrel. 06, Created)
DT 01-JUN-1998 (TREMBLrel. 06, Last sequence update)
DT 01-NOV-1998 (TREMBLrel. 08, Last annotation update)
DE 17 kDa common-antigen (Fragment).
OS Rickettsia sp.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiae; Rickettsia.
OX NCBI_TaxID=789;
RN [1]
RP SEQUENCE FROM N.A.
RA MEDLINE=98087556; PubMed=9425244;
RA Davis M.J., Ying Z., Brunner B.R., Pantofa A., Ferwerda F.H.;
RT "Rickettsial relative associated with papaya bunchy top disease.";
RL Curr. Microbiol. 36:80-84(1998).
DR EMBL: U76907; AAC02809.1; -.
FT NON_TER 1
FT NON_TER 148
SQ SEQUENCE 148 AA; 15050 MW; A7AFEEFE0AEFEAC CRC64;

Query Match
Best Local Similarity 37.5%; Score 313.5; DB 2; Length 148;
Matches 57; Conservative 29; Mismatches 42; Indels 9; Gaps 2;

OY 26 SROEVGAATGAAGVAGVAGOLFPGKSGRYAMAIGAVLGLGSLGKSGMDQDK-----IK 81
DB 17 NKQSGTILGIGTGLGSLGVSQFGGGRILAAVAGALLGAILGNIQIGAMDEQDKLAELT 76
OY 82 LKNSLEKAKAGVTRRRNPDTGNSYSVEPVRTYQRYNKOERRQYCREFOKAMTAGOK 141
DB 77 SQRALEAAPSSQSVQWRNPDNGNYGTVPKRAY-----KNTGQYCREYTGTVVVGSKQ 131
OY 142 ELYGTACRQPDGRQV 158
DB 132 KAYGTACRQPDGRQV 148

RESULT 3
ID 09F9F2 PRELIMINARY; PRT: 159 AA.
AC 09F9F2;
DT 01-MAR-2001 (TREMBLrel. 16, Created)
DT 01-MAR-2001 (TREMBLrel. 16, Last sequence update)
DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
DE 17 kDa genus-common antigen.
OS Rickettsia felis (Rickettsia azadi).
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiae; Rickettsia.
OX NCBI_TaxID=42862;
RN [1]
RP SEQUENCE FROM N.A.
RA MEDLINE=21217364; PubMed=11321078;
RA Bouyer D.H., Stenos J., Crocquet-Valdes P., Moron C.G., Popov V.L.,
RA Zavala-Velazquez J.E., Foil L.D., Stohard D.R., Azad A.F.,
RA Walker D.H.;
RT "Rickettsia felis: molecular characterization of a new member of the
RT spotted fever group.";
RL Int. J. Syst. Evol. Microbiol. 51:339-347(2001).
DR EMBL: AF195118; AAG28452.1; -.
SQ SEQUENCE 159 AA; 16497 MW; 34C5B020AF470AIF CRC64;

Query Match
Best Local Similarity 34.8%; Score 291; DB 2; Length 159;
Matches 61; Conservative 28; Mismatches 57; Indels 14; Gaps 4;

OY 9 SSLLIISV---FLVGC--AQNFSROEVGAATGAAGVAGVAGOLFPGKSGRYAMAGCAVIG 63
DB 5 SKMIIALASMLQACNGPGCKNKQGTGTLIGAGGALLGSOFGKGGKQGLVGVGALIG 64
```

```
OY 64 GLISKTIGSMDQDK-----IKLNSLEKAKAGVTRRRNPDTGNSYSVEPVRTYQRYNK 119
DB 65 AVLGGQIGAGMDEQDRILAEITSORALEATPGSGVWRNPDNGNHGYTPNKTY----- 119
OY 120 QERRQYCREFOKAMTAGOKOELTYGTACRQPDGRQVVIS 159
DB 120 RNSYGQYCREYTGTVVVGKQKRAYGNACRQPDGLMOVN 159

RESULT 4
ID 052252 PRELIMINARY; PRT: 137 AA.
AC 052252;
DT 01-JUN-1998 (TREMBLrel. 06, Created)
DT 01-JUN-1998 (TREMBLrel. 06, Last sequence update)
DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
DE 17 kDa antigen (Fragment).
OS Rickettsia cooley.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiae; Rickettsia.
OX NCBI_TaxID=69410;
RN [1]
RP SEQUENCE FROM N.A.
RA Billings A.N., Teltow G.J., Walker D.H.;
RT "Molecular characterization of a novel spotted fever group rickettsial
RT species from ixodes scapularis in Texas.";
RL Submitted (OCT-1997) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF031534; AAB95267.1; -.
FT NON_TER 1
FT NON_TER 137
SQ SEQUENCE 137 AA; 14215 MW; A27597A9AFD85FC3 CRC64;

Query Match
Best Local Similarity 31.9%; Score 266.5; DB 2; Length 137;
Matches 53; Conservative 23; Mismatches 49; Indels 9; Gaps 2;

OY 23 QNFSROEVGAATGAAGVAGVAGOLFPGKSGRYAMAIGAVLGLGSLGKSGMDQDK--- 79
DB 7 RGMNKGSTGLIGAGGALLGSGQFGKQGLVGVGALLGAVLGGQIGAGMDEQDRILA 66
OY 80 -IKLNSLEKAKAGVTRRRNPDTGNSYSVEPVRTYQRYNKOERRQYCREFOKAMTAG 138
DB 67 ELTSORALEAAPSSQSVQWRNPDNGNYGTVPNKTY-----RNSYGQYCREYTGTVVIG 121
OY 139 OKOELTYGTACRQPD 152
DB 122 KQKRAYGNACRQPD 135

RESULT 5
ID 09K2N6 PRELIMINARY; PRT: 144 AA.
AC 09K2N6;
DT 01-OCT-2000 (TREMBLrel. 15, Created)
DT 01-OCT-2000 (TREMBLrel. 15, Last sequence update)
DT 01-OCT-2000 (TREMBLrel. 15, Last annotation update)
DE 17kDa antigen (17 kDa antigen) (Fragment).
OS Male-killing Rickettsia from Adalia bipunctata.
OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
OC Rickettsiaceae; Rickettsiae; Rickettsia.
OX NCBI_TaxID=38026;
RN [1]
RP SEQUENCE FROM N.A.
RA Schlenker H.J.G.V.D., Habig M., Sloggett J.J., Webberley M.K.,
RA Bertrand D., Hurst G.D., Majerus M.E.N.;
RT "On the evolution of male-killing: Monophyletic origin and horizontal
RT transfer of male-killing Rickettsia (a-Proteobacteria) from two con-
RT generic ladybirds, Adalia bipunctata L. and A. decempunctata L.
RT (Coleoptera: Coccinellidae).";
RL Submitted (APR-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL: AJ269518; CAB96383.1; -.
DR EMBL: AJ269517; CAB96382.1; -.
FT NON_TER 1
FT NON_TER 144
```

SQ SEQUENCE 144 AA; 14785 MW; C8254739CA56AE7 CRC64;

Query Match 31.2%; Score 260.5; DB 2; Length 144;

Best Local Similarity 39.7%; Pred. No. 4, 4e-16;

Matches 52; Conservative 22; Mismatches 48; Indels 9; Gaps 2;

OY 26 SROEVAATGAVVAGVAGOLFGRKSGRVAMATGAVLGLIGSKIGSMDQDK---IK 81

DB 17 NKGGTGTLLGGAGALLGSGFGRKGGQLVGVGALLGAVLGIGAGMDEQDRRLAELT 76

OY 82 LNSLEKVAAGVYTRMRNPDTGNSYVEPRYTRYQRNKOERRQOYCREFOQKAMINGOKO 141

DB 77 SORALEAPSGSVNEMRPNNGHGYVTPNKTY-----RNSTGYCREYTOTVIVIGKOO 131

OY 142 EIYGTACROPD 152

DB 132 KATGNACROPD 142

RESULT 6

O31065 PRELIMINARY; PRT: 137 AA.

AC 031065; O9MM02; PRT: 137 AA.

DT 01-JAN-1998 (TREMBLrel. 05, Created)

DT 01-JAN-1998 (TREMBLrel. 05, Last sequence update)

DT 01-OCT-2001 (TREMBLrel. 18, Last annotation update)

DE 17 kDa antigen (17 kDa protein) (Fragment).

OS Rickettsia honei.

OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;

OC Rickettsiaceae; Rickettsiae; Rickettsia.

OX NCBI_TaxID=37816;

RN [1]

RP SEQUENCE FROM N.A.

RC STRAIN=TF-118;

RA Fillings A.N., Yu X.-J., Teel P.D., Walker D.H.;

RL Submitted (SEP-1997) to the EMBL/GenBank/DBJ databases.

RN [2]

RP SEQUENCE FROM N.A.

RX MEDLINE=9045882; PubMed=9828442;

RA Stenos J., Roux V., Walker D., Raoult D.;

RT "Rickettsia honei" sp. nov., the aetiological agent of Flinders Island

RT spotted fever in Australia.;

RL Int. J. Syst. Bacteriol. 48:1399-1404(1998).

DR EMBL: AF027124; AAB81846.1; -

DR EMBL: AF060706; AAD20231.1; -

DR EMBL: AF060704; AAD20230.1; -

FT NON_TER 1

SQ SEQUENCE 137 AA; 14167 MW; 75BC1DD0745B428C CRC64;

Query Match 31.0%; Score 259.5; DB 2; Length 137;

Best Local Similarity 39.7%; Pred. No. 5, 1e-16;

Matches 52; Conservative 22; Mismatches 48; Indels 9; Gaps 2;

OY 26 SROEVAATGAVVAGVAGOLFGRKSGRVAMATGAVLGLIGSKIGSMDQDK---IK 81

DB 10 NKGGTGTLLGGAGALLGSGFGRKGGQLVGVGALLGAVLGIGAGMDEQDRRLAELT 69

OY 82 LNSLEKVAAGVYTRMRNPDTGNSYVEPRYTRYQRNKOERRQOYCREFOQKAMINGOKO 141

DB 70 SORALEAPSGSVNEMRPNNGHGYVTPNKTY-----RNSTGYCREYTOTVIVIGKOO 124

OY 142 EIYGTACROPD 152

DB 125 KATGNACROPD 135

RESULT 7

O9K4W8 PRELIMINARY; PRT: 144 AA.

AC 09K4W8; PRT: 144 AA.

DT 01-OCT-2000 (TREMBLrel. 15, Created)

DT 01-OCT-2000 (TREMBLrel. 15, Last sequence update)

DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)

DE 17 kDa antigen (Fragment).

OS male-killing Rickettsia from Adalia decempunctata.

OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;

OC Rickettsiaceae; Rickettsiae; Rickettsia.

OX NCBI_TaxID=120393;

RN [1]

RP SEQUENCE FROM N.A.

RX MEDLINE=20575219; PubMed=11133455;

RA Schlenker H.J.G.V.D., Habig M., Sloggett J.J., Webberley M.K.,

RT Bertrand D., Hurst G.D.P., Majerus M.E.N.;

RT "Incidence of male-killing Rickettsia sp. (alpha-Proteobacteria) in

RT the Ten-Spot Ladybird Beetle Adalia decempunctata L. (Coleoptera:

RT Coccinellidae).";

RL Appl. Environ. Microbiol. 67:270-277(2001).

DR EMBL: AF269516; CAB96381.1; -

FT NON_TER 1

SQ SEQUENCE 144 AA; 14801 MW; C825472F16A56AE7 CRC64;

Query Match 31.0%; Score 259.5; DB 2; Length 144;

Best Local Similarity 39.7%; Pred. No. 5, 4e-16;

Matches 52; Conservative 22; Mismatches 48; Indels 9; Gaps 2;

OY 26 SROEVAATGAVVAGVAGOLFGRKSGRVAMATGAVLGLIGSKIGSMDQDK---IK 81

DB 17 NKGGTGTLLGGAGALLGSGFGRKGGQLVGVGALLGAVLGIGAGMDEQDRRLAELT 76

OY 82 LNSLEKVAAGVYTRMRNPDTGNSYVEPRYTRYQRNKOERRQOYCREFOQKAMINGOKO 141

DB 77 SORALEAPSGSVNEMRPNNGHGYVTPNKTY-----RNSTGYCREYTOTVIVIGKOO 131

OY 142 EIYGTACROPD 152

DB 132 KATGNACROPD 142

RESULT 8

O53154 PRELIMINARY; PRT: 154 AA.

AC 053154; PRT: 154 AA.

DT 01-NOV-1996 (TREMBLrel. 01, Created)

DT 01-NOV-1996 (TREMBLrel. 01, Last sequence update)

DT 01-NOV-1998 (TREMBLrel. 08, Last annotation update)

DE (clone PRB F1SF 1), 5' end CDS (Fragment).

OS Rickettsia sp.

OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;

OC Rickettsiaceae; Rickettsiae; Rickettsia.

OX NCBI_TaxID=789;

RN [1]

RP SEQUENCE FROM N.A.

RX MEDLINE=93084757; PubMed=1452660;

RA Baird R.W., Lloyd M., Stenos J., Ross B.C., Stewart R.S., Dwyer B.;

RT "Characterization and comparison of Australian human spotted fever

RT group rickettsiae.;"

RL J. Clin. Microbiol. 30:2896-2902(1992).

DR EMBL: M99391; AAA73386.1; -

FT NON_TER 154

SQ SEQUENCE 154 AA; 15849 MW; F5C35855EDB439D2 CRC64;

Query Match 30.1%; Score 252; DB 2; Length 154;

Best Local Similarity 35.5%; Pred. No. 2, 8e-15;

Matches 55; Conservative 29; Mismatches 57; Indels 14; Gaps 4;

OY 9 SLLIITSV---FLVGC--AQNFSROEVAATGAVVAGVAGOLFGRKSGRVAMATGAVL 63

DB 5 SKIMIALATSMLOACNGPGMKNKGTGTLGGAGALLGSGFGRKGGQLVGVGALLG 64

OY 64 GLIGSKIGSMDQDK---IKLNSLEKVAAGVYTRMRNPDTGNSYVEPRYTRYQRN 119

DB 65 AVLDGQIGAGMDEQDRRLAELTSORALEAPSGSVNEMRPNNGHGYVTPNKTYRN 124

OY 120 OERROOYCREFOQKAMINGOKOIEYGTACROPDGR 154

Db 125 QD-----CRVYTQTIVIGSKQKQKAYGNACRPPDQ 154

RESULT 9

Q9F909 PRELIMINARY: PRT: 151 AA.

AC 09F909: 09F909: 151 AA.
 DT 01-MAR-2001 (TREMBlrel. 16, Created)
 DT 01-MAR-2001 (TREMBlrel. 16, Last sequence update)
 DT 01-MAR-2001 (TREMBlrel. 16, Last annotation update)
 DE Outer membrane protein (Fragment).
 OS Rickettsia helvetica.
 CC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
 CC Rickettsiaceae; Rickettsiae; Rickettsia.
 OX NCBI_TaxID=35789;

RP SEQUENCE FROM N.A.
 RA Nilsson K., Pahlson C.;
 RT "Novel peptide diagnostic reagent and kit for detection of
 RT rickettsiosis."
 RL Submitted (AUG-1999) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AF181036; AAC09427.1; -.
 FT NON_TER 151
 SQ SEQUENCE 151 AA; 15621 MW; B7407B9C71E4B39 CRC64;

Query Match 29.5%; Score 247; DB 2; Length 151;
 Best Local Similarity 36.2%; Pred. No. 7.8e-15;
 Matches 55; Conservative 26; Mismatches 57; Indels 14; Gaps 4;

OY 9 SLLIIISV--FLVGC--AQNFSRQEVGAATGAVGVAGQDLFGKSGRYAMAGGAVLG 63
 Db 5 SKIMIALAASMLQACNGPGSMNKGITLLGAGGALLSOGKKGQGLVGVGALLG 64
 OY 64 GLISKIKGSDQDQD-----IKLNSLEKVKAGQVTRNPDGNSYSEPVRTYGRYRK 119
 Db 65 AVLGQGLVAGNDEQDRRLAELTSORALEAPSGSNVEWRNDGNHGYTPNKTY----- 119
 OY 120 QERRQYCRFQOKAMAGOKOETYPACROP 151
 Db 120 RNSTGQYCREYTQTVVIGGKQKQKAYGNACROP 151

RESULT 10

Q9F001 PRELIMINARY: PRT: 131 AA.

AC 09F001: 09F001: 131 AA.
 DT 01-MAR-2001 (TREMBlrel. 16, Created)
 DT 01-MAR-2001 (TREMBlrel. 16, Last sequence update)
 DT 01-MAR-2001 (TREMBlrel. 16, Last annotation update)
 DE 17 kDa protein (Fragment).
 OS Rickettsia sp. California 2.
 CC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
 CC Rickettsiaceae; Rickettsiae; Rickettsia.
 OX NCBI_TaxID=147259;

RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-CALIFORNIA 2;
 RA Raoul D.;
 RT "A new SFG rickettsia isolated from fleas."
 RL Submitted (JAN-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AF210693; AAG48554.1; -.
 FT NON_TER 131
 SQ SEQUENCE 131 AA; 13374 MW; 23C8819B29FF860 CRC64;

Query Match 28.4%; Score 237.5; DB 2; Length 131;
 Best Local Similarity 37.8%; Pred. No. 4.7e-14;
 Matches 48; Conservative 22; Mismatches 48; Indels 9; Gaps 2;

OY 26 SRQEVGAATGAVGVAGQDLFGKSGRYAMAGGAVLGILGSKIGQSDPDQD---IK 81
 Db 10 NKQGTGILLGAGGALLGSGQFGKQGLVGVGALLGAVLGQIGAGMDEQDRRLAELT 69
 OY 82 LNSLEKVKAGQVTRNPDGNSYSEPVRTYGRYRKQERRQYCRFQOKAMAGQK 141
 Db 70 SQRALEATPGSTVEWRNDGNHGYTPNKTY-----RNSTGQYCREYTQTVVIGGKQ 124
 OY 142 EITGTAC 148
 Db 125 KAYGNAC 131

RESULT 11

O52637 PRELIMINARY: PRT: 131 AA.

AC 052637: 052637: 131 AA.
 DT 01-NOV-1996 (TREMBlrel. 01, Created)
 DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
 DT 01-NOV-1996 (TREMBlrel. 08, Last annotation update)
 DE 17 kDa antigen (Fragment).
 OS Rickettsia sp.
 CC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
 CC Rickettsiaceae; Rickettsiae; Rickettsia.
 OX NCBI_TaxID=789;

RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=94117373; PubMed=8288533;
 RA Werren J.H., Hurst G.D., Zhang W., Breuer J.A., Stouthamer R.,
 RA Majerus M.E.;
 RT "Rickettsial relative associated with male killing in the ladybird
 RT beetle (Adalia bipunctata)."
 RL J. Bacteriol. 176:388-394(1994).
 DR EMBL: U04162; AAA19235.1; -.
 FT NON_TER 131
 SQ SEQUENCE 131 AA; 13344 MW; A1DCF7105DF52DF CRC64;

Query Match 28.4%; Score 237.5; DB 2; Length 131;
 Best Local Similarity 37.8%; Pred. No. 4.7e-14;
 Matches 48; Conservative 22; Mismatches 48; Indels 9; Gaps 2;

OY 26 SRQEVGAATGAVGVAGQDLFGKSGRYAMAGGAVLGILGSKIGQSDPDQD---IK 81
 Db 10 NKQGTGILLGAGGALLGSGQFGKQGLVGVGALLGAVLGQIGAGMDEQDRRLAELT 69
 OY 82 LNSLEKVKAGQVTRNPDGNSYSEPVRTYGRYRKQERRQYCRFQOKAMAGQK 141
 Db 70 SQRALEAPSGSNVEWRNDGNHGYTPNKTY-----RNSTGQYCREYTQTVVIGGKQ 124
 OY 142 EITGTAC 148
 Db 125 KAYGNAC 131

RESULT 12

Q9L522 PRELIMINARY: PRT: 131 AA.

AC 09L522: 09L522: 131 AA.
 DT 01-OCT-2000 (TREMBlrel. 15, Created)
 DT 01-DEC-2001 (TREMBlrel. 15, Last sequence update)
 DT 01-DEC-2001 (TREMBlrel. 19, Last annotation update)
 DE 17 kDa surface antigen (Fragment).
 OS Rickettsia peacockii.
 CC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;
 CC Rickettsiaceae; Rickettsiae; Rickettsia.
 OX NCBI_TaxID=47589;

RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=DAE100R;
 RX MEDLINE=21091941; PubMed=1157215;
 RA Simser J.A., Palmer A.T., Munderion U.G., Kurtli T.J.;

"Isolation of a spotted fever group rickettsia, Rickettsia peacockii, in a Rocky Mountain wood tick, Dermacentor andersoni, cell line.".

RT In a Rocky Mountain wood tick, Dermacentor andersoni, cell line.".

RL EMBL: AF260571; AAF69012.1; -.

DR EMBL: AF260571; AAF69012.1; -.

FT NON_TER 131 131

SQ SEQUENCE 131 AA; 13413 MW; 228C020550CA9D0 CRC64;

Query Match 28.3%; Score 236.5; DB 2; Length 131;
Best Local Similarity 37.8%; Pred. No. 5.8e-14;
Matches 48; Conservative 22; Mismatches 48; Indels 9; Gaps 2;

QY 26 SROEVGATGAVGVAGVAGLIGSKIGOSMDQDK-----IK 81
10 NKQGTGTLGAGGALLGSGDFGKGGVGVGALLGAVLGQIGAGMDEDRRLAELT 69
DB 82 LNSLEKVKAGVTRMRNPTGNSYSVEPYRTYRKQERROOYCFEFOOKAMIAQOK 141
70 SORLETPAGSGSNVEMWPNNGNYGVTYPKTY-----RNSGTGCREYTOTVVGKQO 124

QY 142 EIVGTAC 148
DB 125 KAYGNAC 131

RESULT 13

031208

ID 031208 PRELIMINARY; PRT; 105 AA.

AC 031208; STRAIN=LA COPITA;

DT 01-JUN-1998 (Tremblrel. 05, Created)

DT 01-JAN-1998 (Tremblrel. 05, Last sequence update)

DT 01-DEC-2001 (Tremblrel. 19, Last annotation update)

DE 17 kDa antigen (Fragment).

OS Rickettsia sp. 'La Copita'.

OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;

OC Rickettsiaceae; Rickettsiae; Rickettsia.

NCBI_TaxID=69475;

SEQUENCE FROM N.A.

STRAIN=LA COPITA;

MEDLINE=98367252; PubMed=9701930;

Billings A.N., Yu X.J., Teel P.D., Walker D.H.;

"Detection of a spotted fever group rickettsia in Amblyomma cajennense

(Acari: Ixodidae) in south Texas.";

RL J. Med. Entomol. 35:474-478(1998).

DR EMBL: AF033499; AAB86943.1; -.

FT NON_TER 105 105

SQ SEQUENCE 105 AA; 11236 MW; 7BD035104701D4FB CRC64;

Query Match 26.7%; Score 223.5; DB 2; Length 105;
Best Local Similarity 41.2%; Pred. No. 6.6e-13;
Matches 47; Conservative 17; Mismatches 33; Indels 17; Gaps 3;

QY 43 GOLFSGKGRVMAAIGAVLIGLIGSKIGOSMDQDK-----IKLNSLEKVKAGVTRMR 98
3 GOLVGVGV-----CALTGAVLGQIGAGMDEDRRLAELTNSQRLLETPAGSGSNVEMR 54

QY 99 NPDTGNSYSVEPYRTYRKQERROOYCFEFOOKAMIAQOKETGTACRQDP 152
55 NPDNGNMGVTPPKTY-----RNSGTGCREYTOTVVGKQOKAYGNACRQDP 103

RESULT 14
ID 098564 PRELIMINARY; PRT; 199 AA.

AC 098564; STRAIN=MAFE303099;

DT 01-OCT-2001 (Tremblrel. 18, Created)

DT 01-OCT-2001 (Tremblrel. 18, Last sequence update)

DT 01-MAR-2002 (Tremblrel. 20, Last annotation update)

DE Hypothetical protein mlr7687.

GN MLR7687.

OC Bacteria; Proteobacteria; alpha subdivision; Rhizobiaceae group;

OC Rhizobiaceae; Mesorhizobium.

NCBI_TaxID=381;

SEQUENCE FROM N.A.

STRAIN=MAFE303099;

MEDLINE=21082930; PubMed=11214968;

Kaneko T., Nakamura Y., Sato S., Asanizu E., Kato T., Sasamoto S.,

Matsumoto M., Kiyokawa K., Kohara M., Matsuno M., Matsuno A.,

Nishikawa Y., Nakayama S., Nakazaki N., Shimpo S., Sugimoto M.,

Takeuchi C., Yamada M., Tabata S.;

"Complete genome structure of the nitrogen-fixing symbiotic bacterium

Mesorhizobium loti.

RT DNA Res. 7:331-336(2000).

DR EMBL: AP003012; BAB54098.1; -.

Hypothetical protein; Complete proteome.

SQ SEQUENCE 199 AA; 20517 MW; 98E6F20A734637AA CRC64;

Query Match 17.1%; Score 143; DB 16; Length 199;
Best Local Similarity 31.8%; Pred. No. 2.9e-05;
Matches 35; Conservative 15; Mismatches 50; Indels 10; Gaps 3;

QY 50 SGRVMAAIGAVLIGLIGSKIGOSMDQDKIKL-----NLSLEKVKAGVTRMRNPTGNS 105

DB 92 SGKVTKSIISAMDGGLIGSINGLSDSEKRSALAEYKALEVTTSQKXAMGQDASHY 151

QY 106 YSVEPYRTYRKQERROOYCFEFOOKAMIAQOKETGTACRQDPGRW 155
DB 152 GEVVPAPY-RVGSOD-----CROYTOTVFTGGAGVYARGTACRNADGSW 195

RESULT 15

09AGC7

ID 09AGC7 PRELIMINARY; PRT; 77 AA.

AC 09AGC7; STRAIN=MAFE303099;

DT 01-JUN-2001 (Tremblrel. 17, Created)

DT 01-JUN-2001 (Tremblrel. 17, Last sequence update)

DT 01-JUN-2001 (Tremblrel. 17, Last annotation update)

DE 17 kDa antigen (Fragment).

OS Rickettsia typhi.

OC Bacteria; Proteobacteria; alpha subdivision; Rickettsiales;

OC Rickettsiaceae; Rickettsiae; Rickettsia.

NCBI_TaxID=785;

SEQUENCE FROM N.A.

STRAIN=MAFE303099;

MEDLINE=98367252; PubMed=9701930;

Billings A.N., Yu X.J., Teel P.D., Walker D.H.;

"Detection of a spotted fever group rickettsia in Amblyomma cajennense

(Acari: Ixodidae) in south Texas.";

RL J. Med. Entomol. 35:474-478(1998).

DR EMBL: AF033499; AAB86943.1; -.

FT NON_TER 77 77

SQ SEQUENCE 77 AA; 7955 MW; B1E447C037263918 CRC64;

Query Match 16.7%; Score 140; DB 2; Length 77;
Best Local Similarity 38.7%; Pred. No. 1.6e-05;
Matches 29; Conservative 13; Mismatches 29; Indels 4; Gaps 1;

QY 43 GOLFSGKGRVMAAIGAVLIGLIGSKIGOSMDQDK-----IKLNSLEKVKAGVTRMR 98
3 GOLFSGKGRVMAAIGAVLIGLIGSKIGOSMDQDK-----IKLNSLEKVKAGVTRMR 98

QY 99 NPDTGNSYSVEPYRT 113
DB 63 NPDNGNMGVTPPKT 77

Search completed: February 12, 2003, 16:45:00
Job time : 45 secs

THIS PAGE BLANK (USPTO)